Kevin Mooney
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VIA ELECTRONIC MAIL

July 27, 2018

Erich Weissbart, P.G.
EPA Region 3
Land and Chemicals Division
701 Mapes Road
Fort Meade, MD 20755

Subject: **Semi-Annual Project Progress Report: January – June 2018**
RCRA Corrective Action Permit MDD046279311
Former Appliance Park East Facility
Columbia, Maryland

Dear Mr. Weissbart:

Please find attached the Semi-Annual Project Progress Report for the former Appliance Park East facility in Columbia, Maryland. This report covers the period from January 1 to June 30, 2018, and is submitted by the General Electric Company (GE) pursuant to Condition II.C of the above-referenced permit, as modified by the United States Environmental Protection Agency (EPA).

As required by Condition I.B.9 of the above-referenced permit, I certify under penalty of law that the enclosed report was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Please contact me or Belssi Chang Lee of Tetra Tech at (410) 990-4607 if you have any questions regarding the attached report.

Sincerely,

Kevin Mooney
Senior Project Manager
GE Global Operations - Environment, Health & Safety

Attachment

cc: Belssi Chang Lee, Tetra Tech (via email)
Ed Hammerberg, MDE (via email)
Curt Lebak, RREEF (via email)
Bill Rowe, Howard Hughes Corporation (via email)

SEMI-ANNUAL PROJECT PROGRESS REPORT

RCRA CORRECTIVE ACTION PERMIT (PERMIT)

Permittee:	General Electric Company (GE)
Permit Number:	MDD046279311
Prepared for	GE Global Operations – Environmental Remediation 159 Plastics Avenue Pittsfield, Massachusetts 01201
Prepared By:	Tetra Tech, Inc. (Tetra Tech) 51 Franklin Street, Suite 400 Annapolis, Maryland 21401
Date:	July 25, 2018
Report Period:	January 1, 2018 to June 30, 2018
Copies:	Maryland Department of the Environment (MDE) RREEF Engineering The Howard Hughes Corporation

1. Progress Made This Period

Underground Storage Tank (UST) No. 9 - CMS Unit 4

Final groundwater verification sampling was performed in May 2018 in accordance with the 2013 Post-Termination SAP (Tetra Tech, 2016); the report is in Attachment 1. The sampling was performed per EPA approval[i] in its January 23, 2018 email following GE submittal of a January 9, 2018 Technical Memorandum (Tetra Tech, 2018a) which detailed the results of statistical analyses performed for the UST No. 9 groundwater data. The statistical results indicated chemicals of concern likely decreased to levels below Maximum Contaminant Levels (MCLs) by 2013. All final verification results were non-detect except for the following:

[i] January 23, 2018 email from Erich Weissbart, P.G., Land and Chemicals Division, USEPA Region III to Kevin Mooney with GE and Belssi Chang with Tetra Tech

Compound (µg/L)	Benzene	Ethylbenzene	MTBE	Toluene	Xylene
Clean-up Goal (µg/L)	5	**700**	**20**	**1,000**	**10,000**
TP-8	ND	**18.7**	ND	ND	**33.5**
ERM-7	ND	**46.4**	ND	**4.5**	**31.2**
ERM-6	ND	**56.1**	ND	ND	**93.8**

µg/L – micrograms per liter *ND – non-detect*

The final verification sampling results along with the sampling results from the previous two consecutive monitoring events (2014 and 2016) and January 2018 statistical analyses results, confirm that groundwater clean-up goals have been attained at the UST No. 9 area. Therefore, GE is requesting a No Further Action determination be issued for the former UST No. 9 area.

Volatile Organic Compounds (VOCs) in Soil and Groundwater Beneath and Around the Former Manufacturing Building - RCRA Facility Investigation (RFI) Unit 2

The Parcel A-10 pump-and-treat system was fully operational over the last six months as noted in the monthly monitoring reports submitted to the United States Environmental Protection Agency (EPA) for this reporting period (i.e., January through June 2018). Attachment 2 includes summary tables and figures showing the site plan and performance monitoring results for the pump-and-treat system.

A groundwater monitoring event was conducted in May 2018 in accordance with the approved SAP dated May 4, 2011; the report (Tetra Tech, 2018b) was previously submitted to EPA. Attachment 2 includes a summary of the results including groundwater elevation data, groundwater elevation contour maps for the saprolite and bedrock units, and summary of analytical results. The groundwater samples were collected using passive diffusion bags (PDBs). Tetra Tech deployed the (PDBs) on May 04, 2018 and retrieved them on May 23, 2018 to collect the groundwater samples. The samples were analyzed for volatile organic compounds (VOCs) by EPA Method 8260. The groundwater analytical results are summarized in Table 2; Table 3 presents trichloroethene (TCE) results since June 2007. Figures 9 and 10 illustrate the change in TCE concentrations since June 2000 at wells located within the plume core and at wells located at the plume toe and cross-gradient of the plume, respectively[ii]. The groundwater elevation and sample results from the May 2018 sampling event show that the hydraulic containment system continues to operate as intended. Specifically, VOC-impacted groundwater continues to be contained on Parcel A-10.

[ii] Abnormalities in the trends shown on Figure 9 (2MW-11) and Figure 10 (S-2, S-4, 2MW-4) are due to non-detect results, which are considered to be anomalous based on the analytical results from subsequent sampling events.

The Phase II soil vapor extraction (SVE) system was decommissioned in May 2018 per January 24, 2018 EPA approval[iii] to permanently shut down and decommission the system based on the asymptotic decline of vapor concentrations to below 10% startup concentrations. The SVE wells were abandoned in accordance with Maryland Department of the Environment requirements and all aboveground system components were removed for proper off-site disposal. The SVE system decommissioning report (Tetra Tech, 2018c) is in Attachment 3.

Warehouse Building Oil/Water Separator and Acid Neutralization Units - RFI Unit 6

The most recent monitoring event under the EPA-approved August 19, 2002 SAP was performed on November 17, 2017 (the prior 5-year monitoring event was conducted on November 29, 2012). Groundwater samples were collected from monitoring wells 6MW-1, 6MW-2, 6MW-3, and OBG-65. The groundwater monitoring results were presented in the report submitted to EPA on December 11, 2017 (Tetra Tech, 2017). Attachment 4 includes a summary of the groundwater monitoring results including groundwater levels and the respective groundwater elevations (Table 1) and summary of analytical results (Table 2). VOCs were not detected in any of the groundwater samples except for 6MW-2, which is located at the former oil/water separator under the building. The groundwater elevation data and sample results show that the extent of VOC-affected groundwater remains within the footprint of the Warehouse Building.

Other Activities Conducted Pursuant to the Permit

The current RCRA Corrective Action Permit was issued by EPA for the facility with an effective date of November 3, 2012. In accordance with Part II.B.3 of the Permit, GE submitted an Institutional Control Plan (IC Plan) dated January 24, 2013 to EPA. By its email to GE, EPA approved the IC Plan on February 5, 2013. EPA approved the environmental covenants (ECs) for each of the properties subject to the IC Plan previously; however, following submittal of the signed ECs for parcels A-8, A-10 and A-15, MDE and EPA requested that the EC template be revised. An EC has been executed and recorded for Parcel A-8. GE is in communication with EPA regarding the ECs for the remaining parcels.

2. Problems Encountered During This Period

No problems were encountered during this period.

[iii] January 24, 2018 email from Erich Weissbart, P.G., Land and Chemicals Division, USEPA Region III to Kevin Mooney with GE and Belssi Chang with Tetra Tech.

3. Projected Work for the Next Reporting Period

UST No. 9 - CMS Unit 4

As indicated previously, final groundwater verification sampling was completed in May 2018 and GE is requesting a No Further Action determination be issued for the UST No. 9 area.

VOCs in Soil and Groundwater Beneath and Around the Former Manufacturing Building - RFI Unit 2

The Parcel A-10 pump-and-treat system is expected to operate at full-scale through the next reporting period, with the exception of the operation of recovery well B-3 (which will be sampled again in September 2018 to monitor for rebound in VOC concentrations). The next groundwater monitoring event will be conducted in November 2018 in accordance with the SAP. Groundwater monitoring will include the monitoring wells on a semi-annual sampling frequency.

Warehouse Building Oil/Water Separator and Acid Neutralization Units - RFI Unit 6

The next monitoring event is scheduled for October/November 2022.

Other Activities To Be Conducted Pursuant to the Permit

As stated previously, GE is continuing work towards finalizing the ECs for each of the properties subject to the IC Plan. Once the ECs have been executed by all appropriate parties, the ECs will be recorded with the Howard County Land Records. An institutional control monitoring report will be submitted with the next semi-annual progress report.

4. Changes in Personnel

There were no changes in personnel during this reporting period.

References

Tetra Tech, Inc. (Tetra Tech) 2016. *Biennial Groundwater Sampling and Analyses for Underground Storage Tank (UST) No. 9. RCRA Corrective Action Permit MDD046279311, Former Appliance Park East Facility, Columbia, MD*. November 30, 2016.

Tetra Tech, 2017. *RFI Unit 6 Groundwater Monitoring Report, November 17 Sampling Event, RCRA Corrective Action Permit MDD046279311, Former Appliance Park East Facility, Columbia, Maryland*. December 11, 2017.

Tetra Tech, 2018a. Statistical Analyses of Groundwater Monitoring Results for Underground Storage Tank (UST) No. 9, RCRA Corrective Action Permit MDD046279311, Former Appliance Park East Facility, Columbia, MD. January 18, 2018.

Tetra Tech, 2018b. *Semi-Annual Groundwater Monitoring Report, May 2018 Sampling Event, RCRA Corrective Action Permit MDD046279311, CMS Units 2 and 7, Former Appliance Park East Facility, Columbia, Maryland*. July 3, 2018.

Tetra Tech, 2018c. SVE System Decommissioning Report, Former Appliance Park East Facility, Columbia, MD. July 17, 2018.

Attachments

Attachment 1: Final Groundwater Verification Sampling Report and Request for No Further Action for Underground Storage Tank (UST) No. 9 - CMS Unit 4

Attachment 2: Findings Summary for Groundwater for RFI Units 2 and 7

Attachment 3: Phase II SVE System Decommissioning Report –RFI Units 2 and 7

Attachment 4: Findings Summary for Warehouse Building Oil/Water Separator and Acid Neutralization Units RFI Unit 6

ATTACHMENT 1

To Semi-Annual Project Progress Report
RCRA Corrective Action Permit
No. MDD046279311

General Electric Co.
Former Appliance Park East Facility
Columbia, MD

Period January 1, 2018 to June 30, 2018

Final Groundwater Verification Sampling Report and Request for No Further Action for Underground Storage Tank (UST) No. 9 July 2018 - CMS Unit 4

Kevin Mooney
Senior Project Manager
Environmental Remediation

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VIA ELECTRONIC MAIL

July 25, 2018

Mr. Erich Weissbart, P.G.
EPA Region 3
Land and Chemicals Division
701 Mapes Road
Fort Meade, MD 20755

Subject: Final Verification Sampling Results and Request for No Further Action for Underground Storage Tank (UST) No. 9 RCRA Corrective Action Permit MDD046279311 Former Appliance Park East Facility, Columbia, Maryland

Dear Mr. Weissbart:

This letter presents the results of the final verification sampling performed by Tetra Tech, Inc. (Tetra Tech) in May 2018 at the former UST No. 9 site of the above-referenced facility. The final verification sampling was approved in your email from January 23, 2018 following General Electric Company (GE)'s submission of Tetra Tech's Technical Memorandum dated January 9, 2018 which detailed the results of statistical analyses performed for the UST No. 9 groundwater data. Those results indicated that although plume concentrations have fluctuated slightly above Maximum Contaminant Levels (MCLs) since 2008, chemicals of concern likely decreased to levels below MCLs by 2013.

The final verification sampling was conducted on May 2, 2018 following the procedures presented in the *Post-Termination Groundwater Sampling and Analyses Plan for Underground Storage Tank No. 9, Site Services Area, Former Appliance Park East Facility, Columbia, Maryland* prepared by Environmental Resources Management, Inc. (ERM) on April 23, 2013 ("2013 Post-Termination SAP") and approved by the United States Environmental Protection Agency (EPA) on May 2, 2013. The sampling was completed in May 2018 (instead of October/November) to address potential seasonal variability in groundwater conditions.

Tetra Tech obtained water level measurements and collected groundwater samples from monitoring wells ERM-6, ERM-7, ERM-18, TP-6, TP-7, TP-8, TP-11, OBG-17, and OBG-18 (Figure 1). The groundwater elevations measured are in the attached **Table 1** and **Figure 2**. Quality assurance/quality control samples consisted of a trip blank of deionized water that was prepared by the laboratory, an equipment rinsate blank collected at monitoring well TP-7 (labeled TP-7EB), and a blind duplicate of TP-7 (labeled TP-170). The samples were submitted to Pace Analytical Services, Inc. in Greensburg, PA for benzene, toluene, ethylbenzene, and xylenes (BTEX), and methyl tertiary butyl ether (MTBE) analysis by EPA Method 8260. The purge water was contained on-site in two 55-gallon drums; the drums were labeled and covered with secure

lids pending proper disposal. A sample of the water in the drum containing purge water from ERM-6, ERM-7 and TP-8 was submitted to the laboratory for BTEX analysis; the results for this sample show that the water is not characteristically hazardous.

The laboratory report and Stage 3 data validation are in **Attachment 1**; the completed groundwater sampling forms with chain-of-custody forms are in **Attachment 2**. The analytical results are summarized in **Table 2** and **Figure 2**. The limit of quantitation (LOQ) for benzene, ethylbenzene, toluene and MTBE was 1 microgram per liter (µg/L) and 3 µg/L for total xylenes. All well sample results were non-detect except for the following low-level detections:

Compound	Benzene	Ethylbenzene	MTBE	Toluene	Xylene
Clean-up Goal (µg/L)	**5**	**700**	**20**	**1,000**	**10,000**
TP-8	ND	**18.7**	ND	ND	**33.5**
ERM-7	ND	**46.4**	ND	**4.5**	**31.2**
ERM-6	ND	**56.1**	ND	ND	**93.8**

µg/L – micrograms per liter *ND – non-detect*

The analytical results for ERM-18 which were all non-detect were qualified as "Rejected" during the data validation due to the presence of headspace in the sample vials. However, for the past 20 years (since May 1998) all groundwater analytical results for ERM-18 have been non-detect and the latest and previous results for wells upgradient and downgradient of ERM-18 (i.e., TP-6, TP-7, OBG-17, OBG-18) are also non-detect. Therefore, we do not believe re-sampling of ERM-18 is warranted.

The final verification sampling results, sampling results from the previous two consecutive monitoring events (2014 and 2016), and January 2018 statistical analyses results confirm groundwater clean-up goals at the former UST No. 9 area have been attained.

Based on the above and in accordance with the approved 2013 Post-Termination SAP, GE hereby requests a No Further Action determination be issued for the former UST No. 9 area. Please contact me if you have any questions or require additional information.

Sincerely,

Kevin Mooney
Senior Project Manager – Environmental Remediation

Attachments: Figure 1 – Post-Termination Monitoring Well Locations for UST No. 9
Figure 2 – Groundwater Conditions, May 2018
Table 1 – Summary of Groundwater Elevations in Monitoring Wells at UST No. 9
Table 2 – Summary of Analytical Results for Groundwater Samples at UST No. 9
Attachment 1 – Laboratory Report and Data Validation
Attachment 2 – Groundwater Sampling Forms

cc: Belssi Chang Lee, Tetra Tech

FIGURES AND TABLES

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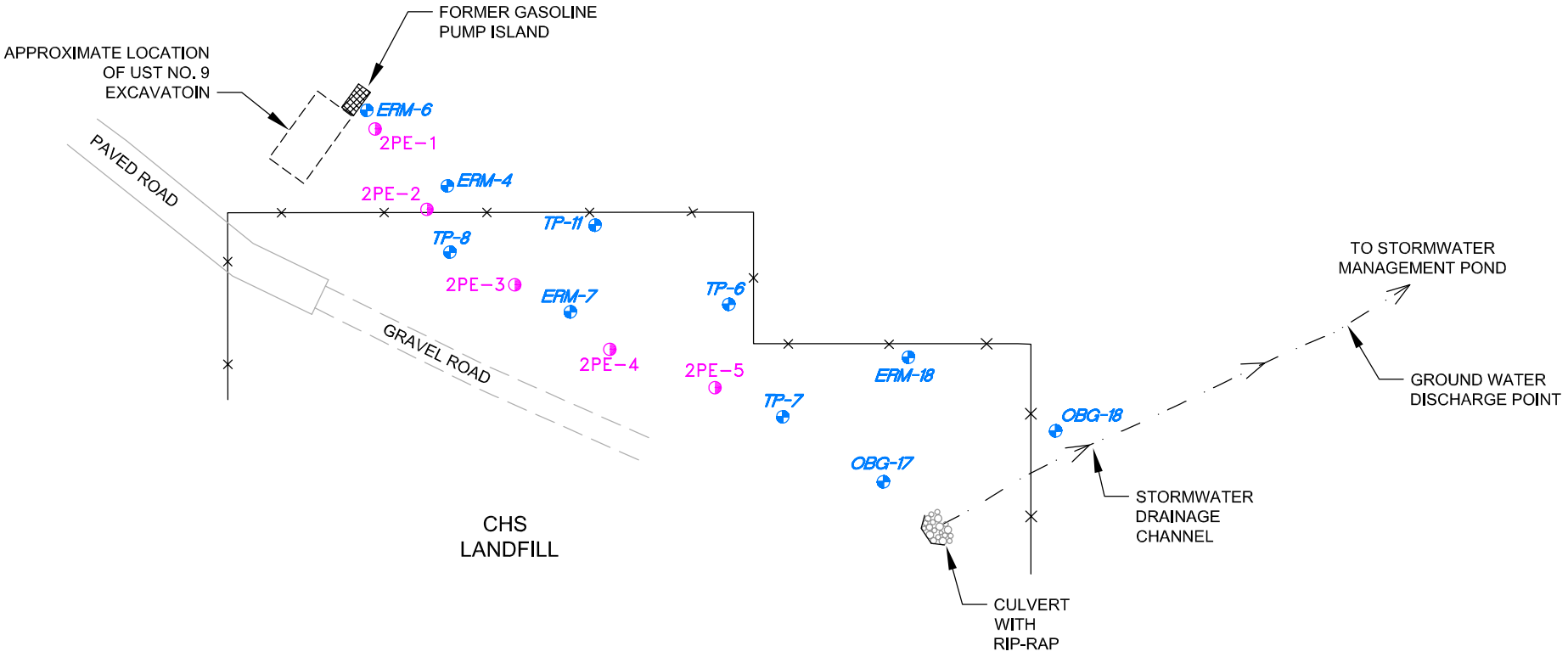
FIGURE 1
POST-TERMINATION MONITORING WELL LOCATIONS FOR UST NO. 9
FORMER APPLIANCE PARK EAST
COLUMBIA, MARYLAND



LEGEND

2PE-1 — 2-PHASE WELL LOCATION

ERM-4 — POST-TERMINATION MONITORING WELL LOCATION

FENCE

0 100 200

SCALE IN FEET

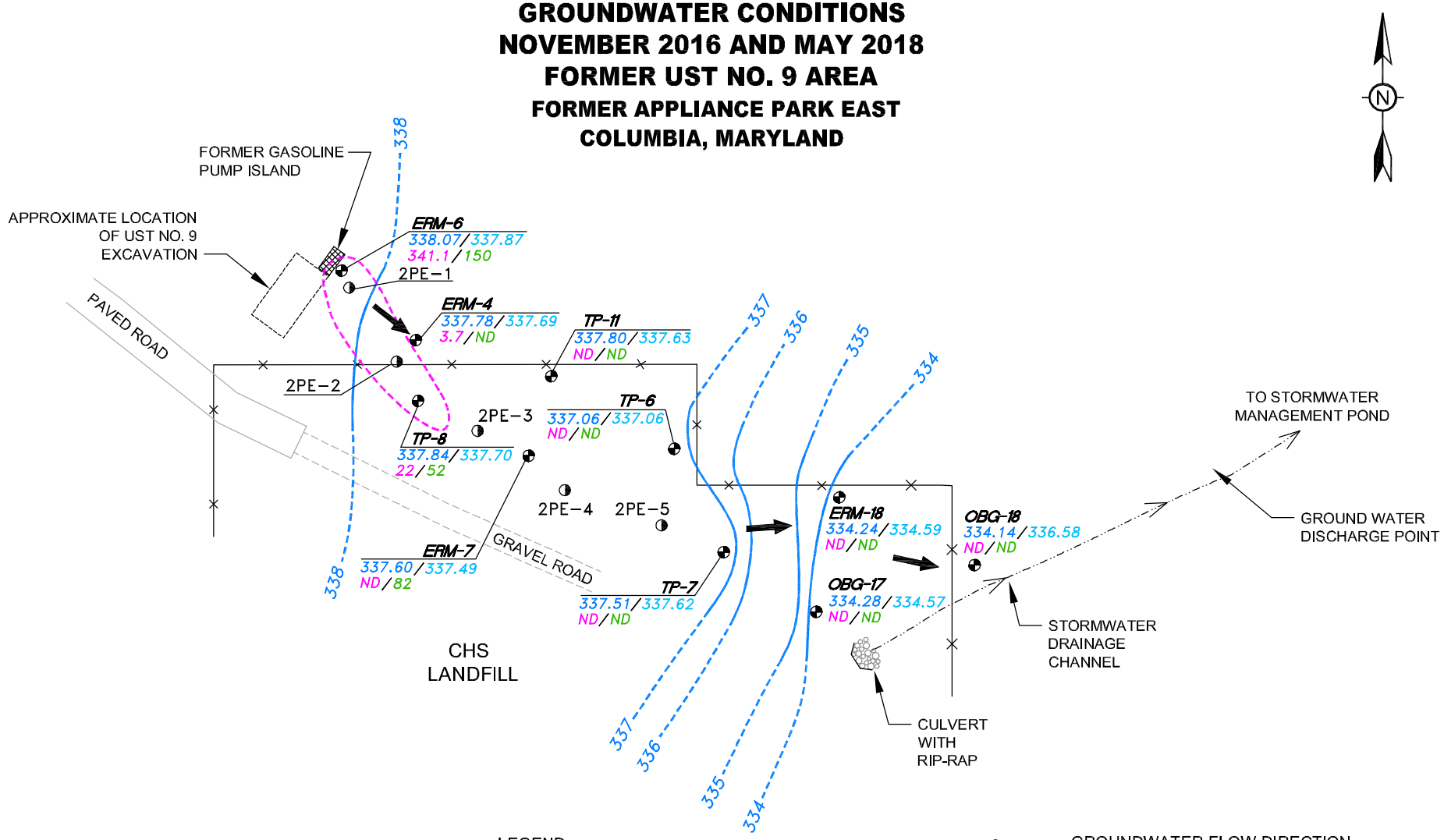
BASE MAP SOURCE:

ERM, INC., DECEMBER 2012 REPORT

TETRA TECH

2204275059A.DWG

FIGURE 2
GROUNDWATER CONDITIONS
NOVEMBER 2016 AND MAY 2018
FORMER UST NO. 9 AREA
FORMER APPLIANCE PARK EAST
COLUMBIA, MARYLAND



LEGEND

2PE-1	2-PHASE WELL LOCATION
ERM-4	POST-TERMINATION MONITORING WELL LOCATION
	FENCE
338.07	GROUNDWATER ELEVATION (FEET) NOVEMBER 2016
337.87	GROUNDWATER ELEVATION (FEET) MAY 2018
338	GROUNDWATER ELEVATION CONTOUR (FEET) (DASHED WHERE INFERRED)
	GROUNDWATER FLOW DIRECTION
22	TOTAL BTEX CONCENTRATION (ug/L) NOVEMBER 2016
52	TOTAL BTEX CONCENTRATION (ug/L) MAY 2018
	APPROXIMATE TOTAL BTEX 5.0 ug/L
ND	NON-DETECT

0 100 200

SCALE IN FEET

BASE MAP SOURCE:
ERM, INC., DECEMBER 2012 REPORT

TETRA TECH

Table 1
Summary of Ground Water Elevations in Monitoring Wells at UST No. 9
Former Appliance Park East Facility, Columbia, Maryland

Well ID	Reference Elevation (ft msl)	1/20/1998		5/14/1998		10/29/1998		4/29/1999		10/28/1999		4/27/2000	
		Depth to Ground Water (ft bre)	Ground Water Elevation (ft msl)	Depth to Ground Water (ft bre)	Ground Water Elevation (ft msl)	Depth to Ground Water (ft bre)	Ground Water Elevation (ft msl)	Depth to Ground Water (ft bre)	Ground Water Elevation (ft msl)	Depth to Ground Water (ft bre)	Ground Water Elevation (ft msl)	Depth to Ground Water (ft bre)	Ground Water Elevation (ft msl)
ERM-4	359.96	22.00	337.96	18.29	341.67	21.57	338.39	21.53	338.43	21.37	338.59	20.15	339.81
ERM-6	360.62	22.39	338.23	18.67	341.95	21.92	338.70	21.9	338.72	21.68	338.94	20.64	339.98
ERM-7	366.30	28.54	337.76	24.95	341.35	28.21	338.09	28.1	338.20	27.93	338.37	26.70	339.60
ERM-18	351.10	16.75	334.35	13.78	337.32	16.72	334.38	16.24	334.86	16.02	335.08	14.72	336.38
TP-6	359.18	21.93	337.25	18.42	340.76	21.53	337.65	21.44	337.74	21.27	337.91	20.05	339.13
TP-7	360.60	23.60	337.00	20.02	340.58	27.71	332.89	23.04	337.56	22.8	337.80	21.59	339.01
TP-8	362.14	24.27	337.87	20.64	341.50	23.8	338.34	23.81	338.33	23.65	338.49	22.44	339.70
TP-11	364.51	26.72	337.79	23.09	341.42	26.33	338.18	26.25	338.26	26.03	338.48	24.88	339.63
OBG-17	351.96	17.76	334.20	14.20	337.76	17.50	334.46	17.20	334.76	17.13	334.83	15.57	336.39
OBG-18	349.14	12.27	336.87	11.29	337.85	15.45	333.69	12.25	336.89	12.25	336.89	11.14	338.00

Well ID	Reference Elevation (ft msl)	10/26/00 (a)		5/1/01 (a)		10/18/01 (a)		5/9/02 (a)		10/24/02 (a)		11/10/04 (a)		10/30/06 (a)	
		Depth to Ground Water (ft bre)	Ground Water Elevation (ft msl)	Depth to Ground Water (ft bre)	Ground Water Elevation (ft msl)	Depth to Ground Water (ft bre)	Ground Water Elevation (ft msl)	Depth to Ground Water (ft bre)	Ground Water Elevation (ft msl)	Depth to Ground Water (ft bre)	Ground Water Elevation (ft msl)	Depth to Ground Water (ft bre)	Ground Water Elevation (ft msl)	Depth to Ground Water (ft bre)	Ground Water Elevation (ft msl)
ERM-4	359.96	21.51	338.45	21.24	338.72	22.34	337.62	22.76	337.20	23.25	336.71	21.02	338.94	NM	--
ERM-6	360.62	21.85	338.77	21.66	338.96	22.73	337.89	23.15	337.47	23.45	337.17	21.37	339.25	22.03	338.59
ERM-7	366.30	28.18	338.12	27.76	338.54	28.90	337.40	29.33	336.97	29.81	336.49	27.53	338.77	28.23	338.07
ERM-18	351.10	16.54	334.56	15.91	335.19	17.33	333.77	17.30	333.80	17.98	333.12	15.98	335.12	16.41	334.69
TP-6	359.18	21.44	337.74	21.10	338.08	22.29	336.89	22.63	336.55	23.16	336.02	21.02	338.16	21.58	337.60
TP-7	360.83	23.16	337.67	22.82	338.01	24.10	336.73	24.44	336.39	24.99	335.84	22.81	338.02	23.29	337.54
TP-8	362.14	23.75	338.39	23.48	338.66	24.61	337.53	25.00	337.14	25.53	336.61	23.25	338.89	23.94	338.20
TP-11	364.51	26.27	338.24	29.99	334.52	27.16	337.35	27.57	336.94	27.82	336.69	25.90	338.61	26.42	338.09
OBG-17	351.96	17.40	334.56	16.77	335.19	18.25	333.71	18.14	333.82	18.77	333.19	16.63	335.33	17.15	334.81
OBG-18	349.14	14.30	334.84	12.32	336.82	15.39	333.75	12.99	336.15	14.59	334.55	14.33	334.81	13.12	336.02

Well ID	Reference Elevation (ft msl)	11/7/08 (a)(b)		11/15/10 (a)(b)		10/23/12 (a)(b)		11/1/2016		5/2/2018	
		Depth to Ground Water (ft bre)	Ground Water Elevation (ft msl)	Depth to Ground Water (ft bre)	Ground Water Elevation (ft msl)	Depth to Ground Water (ft bre)	Ground Water Elevation (ft msl)	Depth to Ground Water (ft bre)	Ground Water Elevation (ft msl)	Depth to Ground Water (ft bre)	Ground Water Elevation (ft msl)
ERM-4	359.96	22.65	337.31	21.68	338.28	22.67	337.29	22.18	337.78	22.27	337.69
ERM-6	360.62	23.05	337.57	22.12	338.50	23.06	337.56	22.55	338.07	22.75	337.87
ERM-7	366.30	29.15	337.15	28.21	338.09	29.17	337.13	28.70	337.60	28.81	337.49
ERM-18	351.10	17.37	333.73	16.30	334.80	17.40	333.70	16.86	334.24	16.51	334.59
TP-6	359.18	22.53	336.65	21.67	337.51	22.56	336.62	22.12	337.06	22.12	337.06
TP-7	360.83	24.32	336.51	23.45	337.38	23.47	337.36	23.32	337.51	23.21	337.62
TP-8	361.82	24.50	337.32	23.55	338.27	24.48	337.34	23.98	337.84	24.12	337.70
TP-11	364.51	27.28	337.23	26.43	338.08	27.31	337.20	26.71	337.80	26.88	337.63
OBG-17	351.96	18.18	333.78	17.15	334.81	18.23	333.73	17.68	334.28	17.39	334.57
OBG-18	349.14	15.42	333.72	13.58	335.56	15.96	333.18	15.00	334.14	12.56	336.58

Notes:
ft msl - feet above mean sea level.
ft bre - feet below reference elevation.
NM - Not Measured.
(a) The stickup for TP-7 was damaged during site maintenance. It has been repaired and re-surveyed. The correct survey elevation is 360.83 feet as of October 2000.
(b) The stickup for TP-8 was damaged during site maintenance in October 2006. It was been repaired and re-surveyed in February 2007. Elevation is 361.82 feet.

Table 2
Summary of Analytical Results for Ground Water Samples at UST No. 9
Former Appliance Park East Facility, Columbia, Maryland

Well ID	ERM-4																						
Analytes (ug/L)	**11/11/96**	**3/17/97**	**6/10/97**	**9/10/97**	**11/24/97**	**1/20/98**	**5/14/98**	**10/29/98**	**4/29/99**	**10/28/99**	**4/27/00**	**10/26/00**	**5/1/01**	**10/18/01**	**5/9/02**	**10/24/02**	**11/10/04**	**11/16/06**	**11/7/08**	**11/15/10**	**10/23/12**	**10/30/14**	**11/01/16**	**05/02/18**
Benzene	**110**	**410**	**130**	**70**	**70**	< 1	< 1	**160**	<1	<1	<1	**84**	<1	**61**	<1	**21**	**<1**	<1	<1	<1	**1.3**	<1	<1	<1
Toluene	**510**	**1,800**	**170**	**4**	**67**	< 1	< 1	**100**	<1	<1	<1	**370**	<1	**300**	<1	**94**	**6.2**	<1	**6.7**	<1	**2.9**	<1	<1	<1
Ethylbenzene	**42**	**400**	**71**	**23**	**23**	< 1	< 1	**74**	<1	<1	<1	**96**	<1	**130**	<1	**46**	**1.9**	<1	**13**	<1	**42**	<1	<1	<1
Xylene	**190**	**1,500**	**250**	**29**	**110**	< 3	< 3	**160**	<3	<3	<3	**380**	<3	**350**	<3	**92**	**5.8**	<3	**46**	<3	**83**	<3	**3.7**	<3
MTBE	**7**	**30**	**18**	**3**	**7**	< 1	< 1	<5	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	**4.0**	<1	<1	<1
Field Measurements																								
pH (standard units)	---	---	---	---	---	5.29	5.39	5.2	5.45	5.62	5.39	5.34	5.30	5.40	6.29	5.54	6.36	5.71	6.44	5.41	5.86	5.08	5.38	5.65
Conductivity*	---	---	---	---	---	116	90	218	105	114	122	187	115	251	137	280	188	162	203	183	210	200	223	268
Temperature (Celsius)	---	---	---	---	---	11.9	14.2	15.8	16.2	17.4	12.0	15.4	14.3	13.7	16.3	12.9	15.0	16.8	17.9	15.2	16.3	14.3	14.7	12.9

Well ID	ERM-6																							
Analytes (ug/L)	**11/11/96**	**3/17/97**	**6/10/97**	**9/10/97**	**11/24/97**	**1/20/98**	**5/14/98**	**5/14/98 PB**	**10/29/98**	**4/29/99**	**10/28/99**	**4/27/00**	**10/26/00**	**5/1/01**	**10/18/01**	**5/9/02**	**10/24/02**	**11/10/04**	**11/16/06**	**11/7/08**	**11/15/10**	**10/23/12**	**10/22/14**	**11/01/16**	**05/02/18**
Benzene	**760**	**890**	NS	NS	**50**	**16**	**140**	**210**	<50	**180**	**550**	**290**	**180**	**94**	**28**	**87**	**22**	<10	<10	**5.9**	<5	**5.4**	<1	<1	<1
Toluene	**6,600**	**17,000**	NS	NS	**4,300**	**1,600**	**2,100**	**2,800**	**260**	**820**	**720**	**690**	**590**	**550**	**390**	**460**	**220**	**360**	**210**	**65**	**38**	**5.9**	**4.6**	**1.1**	<1
Ethylbenzene	**1,400**	**2,300**	NS	NS	**1,300**	**1,000**	**1,500**	**1,500**	**1,200**	**1,600**	**1,700**	**1,600**	**1,200**	**1,700**	**960**	**1,500**	**870**	**640**	**680**	**260**	**340**	**48**	**167**	**120**	**56**
Xylene	**5,800**	**1,300**	NS	NS	**7,600**	**5,500**	**7,300**	**8,200**	**2,700**	**5,600**	**6,200**	**5,700**	**4,200**	**7,000**	**2,800**	**4,600**	**3,000**	**1,900**	**2,100**	**830**	**1,100**	**170**	**368**	**220**	**94**
MTBE	**1,100**	**80**	NS	NS	**9**	**7**	< 50	< 50	<10	<50	<50	<50	<50	<50	<5	**90**	<5	**15**	<20	**12**	<20	**6.4**	<1	<1	<1
Field Measurements																								
pH (standard units)	---	---	---	---	---	5.89	6.50	---	6.45	6.51	6.56	6.38	6.54	6.37	7.70	6.97	5.91	7.22	6.46	6.33	5.97	6.11	6.44	6.11	6.01
Conductivity*	---	---	---	---	---	315	300	---	333	466	528	563	445	505	520	433	617	471	511	462	360	435	312	333	280
Temperature (Celsius)	---	---	---	---	---	12.9	14.8	---	16.4	14.7	16.5	13.1	16.2	15.2	15.2	16.1	14	15.5	17.1	18.2	15.8	17.4	15.36	16.21	14.5

Well ID	ERM-7																						
Analytes (ug/L)	**11/12/96**	**3/17/97**	**6/10/97**	**9/10/97**	**11/24/97**	**1/20/98**	**5/14/98**	**10/29/98**	**4/29/99**	**10/28/99**	**4/27/00**	**10/26/00**	**5/1/01**	**10/18/01**	**5/9/02**	**10/24/02**	**11/10/04**	**11/16/06**	**11/7/08**	**11/15/10**	**10/23/12**	**10/22/14**	**11/01/16**	**05/02/18**
Benzene	**1,200**	**190**	**210**	**58**	**82**	**140**	**45**	**99**	**130**	**110**	<1	**380**	**320**	**250**	**630**	**290**	**45**	**12**	**1.8**	<1	**1.5**	<1	<1	<1
Toluene	**2,300**	**110**	**110**	**5**	**3**	**7**	**1**	**4**	**17**	**13**	<1	**440**	**68**	**320**	**1,300**	**330**	**37**	**300**	**1.1**	<1	<1	<1	<1	**4.5**
Ethylbenzene	**540**	**76**	**68**	**13**	**15**	**36**	**8**	**26**	**89**	**85**	<1	**490**	**360**	**350**	**1,000**	**870**	**160**	**270**	**53**	**5**	**23**	<1	<1	**46**
Xylene	**1,900**	**210**	**150**	**11**	**5**	< 20	< 3	**11**	**19**	**22**	<3	**530**	**260**	**510**	**1,800**	**790**	**98**	**400**	<3.0	<3.0	<3.0	<3	<3	**31**
MTBE	**70**	**11**	**17**	**10**	**15**	**23**	**8**	<20	**22**	<20	<1	<50	<50	<1	**32**	<5	<2.0	<20.0	**1.6**	**1.1**	**1.7**	<1	<1	<1
Field Measurements																								
pH (standard units)	---	---	---	---	---	5.85	5.26	5.38	5.95	5.79	5.09	5.94	5.71	6.00	6.26	5.91	5.74	5.91	5.79	5.00	6.06	5.11	5.18	5.34
Conductivity*	---	---	---	---	---	363	190	374	353	327	39	217	279	229	306	419	168	156	129	168	169	128	169	209
Temperature (Celsius)	---	---	---	---	---	11.7	14.3	13.6	14.2	13.6	12.3	14.0	14.9	15.2	13.9	12.27	13.4	14.9	16.6	14.8	15.03	13.64	14.23	14.57

Well ID	ERM-18																				
Analytes (ug/L)	**11/12/96**	**11/24/97**	**1/20/98**	**5/14/98**	**5/14/98 PE**	**10/29/98**	**4/29/99**	**10/28/99**	**4/27/00**	**10/26/00**	**5/1/01**	**10/18/01**	**5/9/02**	**10/24/02**	**11/10/04**	**11/16/06**	**11/7/08**	**11/15/10**	**10/23/12**	**10/22/14**	**11/01/16**	**05/02/18**
Benzene	**2**	< 1	**6**	< 1	< 1	< 1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	<1	< 1	< 1	< 1	< 1	< 1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1	< 1	< 1	< 1	< 1	< 1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylene	<3	< 3	< 3	< 3	< 3	< 3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
MTBE	**3**	**2**	**7**	< 1	< 1	< 1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Field Measurements																						
pH (standard units)	---	---	5.65	5.88	---	5.58	5.75	5.79	5.77	5.58	5.92	5.20	5.64	5.5	5.36	5.73	5.45	5.57	5.48	5.46	7.14	5.75
Conductivity*	---	---	145	105	---	112	175	196	191	159	24.4	145	168	231	111	164.1	190	236	200	193	230	258
Temperature (Celsius)	---	---	11.4	13.9	---	15.8	12.8	16	11.1	15.4	12.4	16.4	13.7	13.2	12.4	15.9	17.7	15.8	17.1	15.69	15.5	12.54

Notes:

ug/L - micrograms per liter

< signifies not detected at the detection limit.

MCLs - Benzene 5 ug/L; Ethylbenzene 700 ug/L; Toluene 1,000 u MTBE - Methyl tertiary-butyl ether

* micromhos per second

Analyses performed by Pace Analytical Services, Inc. by BMQL - Below Method Quantitation Limit

(a) TP-170 is a blind field duplicate of TP-7

Analyses prior to 2014 performed by Lancaster Laboratories, Inc. using EPA Method SW 846-8021B.

ERM-4 sampled on 10/30/14 and not on10/22/14 when the other UST-9 monitoring wells were sampled due to its manhole cover being under 6 inches of rainwater on 10/22/14.

Table 2
Summary of Analytical Results for Ground Water Samples at UST No. 9
Former Appliance Park East Facility, Columbia, Maryland

Well ID	TP-6																				
Analytes (ug/L)	**11/12/96**	**11/24/97**	**01/20/98**	**05/14/98**	**10/29/98**	**04/29/99**	**10/28/99**	**04/27/00**	**10/26/00**	**05/01/01**	**10/18/01**	**05/09/02**	**10/24/02**	**11/10/04**	**11/16/06**	**11/07/08**	**11/15/10**	**10/23/12**	**10/22/14**	**11/01/16**	**05/02/18**
Benzene	**16**	**120**	**100**	**110**	**25**	**24**	**23**	**6.2**	<1	<1	<1	**1.7**	**2.5**	<1	**4.8**	<1	<1	<1	<1	<1	<1
Toluene	**2**	**19**	**6**	**9**	**1**	BMQL	**1.1**	<1	<1	<1	<1	<1	**1.1**	<1	**3.0**	<1	<1	<1	<1	<1	<1
Ethylbenzene	**4**	**30**	**25**	**31**	**8**	**7**	**6.4**	<1	<1	<1	<1	**3.7**	**2.5**	<1	**33**	<1	<1	<1	<1	<1	<1
Xylene	<3	**18**	**3**	**24**	<3	BMQL	<3	<3	<3	<3	<3	<3	<3	<3	**14**	<3	<3	<3	<3	<3	<3
MTBE	**11**	**36**	**37**	**29**	**7**	**6**	**9.4**	**3.4**	**1.5**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Field Measurements																					
pH (standard units)	---	---	5.19	5.28	5.32	5.7	5.27	5.03	5.17	4.81	5.60	5.78	4.98	5.17	5.20	5.41	4.99	5.05	4.91	6.06	4.95
Conductivity*	---	---	207	130	122	169	179	163	131	249	202	324	385	179	218	184	173	338	284	490	505
Temperature (Celsius)	---	---	10.8	13.4	13	13.5	12.4	11.3	13.2	14.2	12.2	13.3	10.33	11.4	14.9	16.4	15.3	15.7	13.15	13.9	13.98

Well ID	TP-7 (a)																						
Analytes (ug/L)	**11/12/96**	**03/17/97**	**06/10/97**	**09/10/97**	**11/24/97**	**01/20/98**	**05/14/98**	**05/14/98**	**10/29/98**	**04/29/99**	**10/28/99**	**04/27/00**	**10/26/00**	**05/01/01**	**10/18/01**	**05/09/02**	**10/24/02**	**11/10/04**	**11/16/06**	**11/07/08**	**11/15/10**	**10/23/12**	**10/22/14**	**11/01/16**	**05/02/18**
Benzene	**550**	**520**	**380**	**190**	**150**	**170/170**	**35/38**	< 1	**26/30**	**13/13**	**4.6/4.7**	**8.9/8.0**	**6.1/5.7**	**13/12**	**15/15**	**24/23**	**24/27**	**1.8/1.8**	**10/9.8**	**2.3/2.4**	<1/<1	<1/<1	<1<1	<1/<1	<1/<1
Toluene	**150**	**32**	<1	**10**	**8**	**8/8**	**1/1**	< 1	BMQL/<1	BMQL/<1	<1/<1	<1/<1	<1/<1	<1/<1	<1/<1	**1.1/<1**	**1.1/1.1**	<1/<1	**3.1/3.0**	<1/<1	<1/<1	<1/<1	<1/<1	<1/<1	<1/<1
Ethylbenzene	**110**	**120**	**88**	**49**	**41**	**42/43**	**6/6**	< 1	**3/3**	BMQL/<1	<1/<1	**22/19**	**1.4/1.4**	**9.2/8.5**	**6.9/6.2**	**10/9.9**	**8/8.1**	<1/<1	**99/95**	**14/14**	<1/<1	**2.2/2.2**	<1/<1	<1/<1	<1/<1
Xylene	**130**	**70**	**15**	**5**	< 5	<10/<10	<3/<3	< 3	<3/<3	<3/<3	<3/<3	<3/<3	<3/<3	<3/<3	<3/<3	<3/<3	<3/<3	<3/<3	**29/28**	<3/<3	<3/<3	<3/<3	<3/<3	<3/<3	<3/<3
MTBE	**77**	**48**	**35**	**21**	**20**	**21/22**	**4/<5**	< 1	**5/6**	**2/3**	**1.9/1.5**	**<1/1.8**	**2.1/2.1**	<5/<5	**1.6/1.5**	**3.4/3.7**	<5/<5	<1/<1	**<5/1.6**	<1/<1	<1/<1	<1/<1	<1/<1	<1/<1	<1/<1
Field Measurements																									
pH (standard units)	---	---	---	---	---	5.49	5.68	---	5.39	5.42	4.98	4.93	5.40	4.75	6.10	5.29	5.55	5.78	5.45	5.34	4.13	5.2	4.96	6.22	4.22
Conductivity*	---	---	---	---	---	120	120	---	108	149	94	98	125	118	117	166	226	112	89	106	73	78	77	80	86
Temperature (Celsius)	---	---	---	---	---	12.3	13.4	---	17.4	14.5	14.3	11.9	14.3	14	12.9	13.8	11.11	13.4	15.6	17.5	15.2	15.46	14.12	14.9	13.54

Well ID	TP-8																							
Analytes (ug/L)	**11/11/96**	**03/17/97**	**06/10/97**	**09/10/97**	**11/24/97**	**01/20/98**	**05/14/98**	**10/29/98**	**04/29/99**	**10/28/99**	**04/27/00**	**10/26/00**	**05/01/01**	**10/18/01**	**05/09/02**	**10/24/02**	**11/10/04**	**11/16/06**	**11/07/08**	**11/15/10**	**10/23/12**	**10/22/14**	**11/01/16**	**05/02/18**
Benzene	**480**	<1	<1	<1	< 1	< 1	**48**	**170**	**160**	**77**	**61**	**60**	**49**	**44**	**38**	**26**	**9.2**	NS	**3.5**	**5.8**	**2.4**	<1	**1.2**	<1
Toluene	**2,500**	<1	<1	<1	< 1	< 1	**44**	**500**	**230**	**26**	**85**	**200**	**21**	**71**	**320**	**150**	**1.9**	NS	**2.2**	**2.5**	**1.3**	<1	**2.4**	<1
Ethylbenzene	**570**	<1	<1	<1	< 1	< 1	**31**	**230**	**240**	**130**	**190**	**310**	**320**	**320**	**240**	**240**	**43**	NS	**47**	**31**	**4.5**	<1	<1	**19**
Xylene	**2,300**	<3	<3	<3	< 3	< 3	**140**	**1,400**	**650**	**190**	**530**	**720**	**340**	**700**	**700**	**530**	**11**	NS	**72**	**42**	**6.4**	<3	**18.4**	**34**
MTBE	<200	<1	<1	<1	< 1	< 1	< 5	<50	<20	<10	<10	<10	<20	<1	<5	<1	<1	NS	**2.8**	**8.3**	**2.8**	<1	<1	<1
Field Measurements																								
pH (standard units)	---	---	---	---	---	5.28	5.09	4.97	5.36	5.07	5.13	5.21	5.16	5.90	5.76	5.59	5.92	--	5.58	5.66	6.11	5.54	5.78	5.68
Conductivity*	---	---	---	---	---	104	140	416	249	210	280	264	244	251	226	259	170	--	188	208	291	226	249	329
Temperature (Celsius)	---	---	---	---	---	12.6	14.5	14.6	14.4	14.1	12.9	14.3	18	14.5	14.5	11.83	13.6	--	17.0	15.0	17.2	13.83	13.69	14.36

Well ID	TP-11																				
Analytes (ug/L)	**11/12/96**	**11/24/97**	**01/20/98**	**05/14/98**	**10/29/98**	**04/29/99**	**10/28/99**	**04/27/00**	**10/26/00**	**05/01/01**	**10/18/01**	**05/09/02**	**10/24/02**	**11/10/04**	**11/16/06**	**11/07/08**	**11/15/10**	**10/23/12**	**10/22/14**	**11/01/16**	**05/02/18**
Benzene	**23**	< 1	< 1	< 1	**2**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	**51**	< 1	< 1	< 1	BMQL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	**6**	< 1	< 1	< 1	**1**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylene	**29**	< 3	< 3	< 3	BMQL	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
MTBE	<1	< 1	< 1	< 1	BMQL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Field Measurements																					
pH (standard units)	---	---	5.02	5.58	4.97	5.36	3.94	5.05	4.93	4.87	5.70	5.42	4.91	5.62	5.17	5.06	4.85	5.05	5.18	5.13	5.41
Conductivity*	---	---	103	60	205	87	155	116	118	78	108	109	112	98	115	96	202	211	255	812	408
Temperature (Celsius)	---	---	12.6	13.4	13.6	13.6	13.9	10.9	14.4	13.7	12.3	13.7	11.5	12.8	15.6	17.4	14.7	16	13.0	13.6	12.8

Notes:

ug/L - micrograms per liter
MTBE - Methyl tertiary-butyl ether
BMQL - Below Method Quantitation Limit
< signifies not detected at the detection limit.
* micromhos per second.
(a) TP-170 is a blind field duplicate of TP-7.
Analyses performed by Pace Analytical Services, Inc. by EPA Method SW 846-8260 starting in 2014.
Analyses prior to 2014 performed by Lancaster Laboratories, Inc. using EPA Method SW 846-8021B.

MCLs - Benzene 5 ug/L; Ethylbenzene 700 ug/L; Toluene 1,000 ug/L; Xylenes 10,000 ug/L.
NS - TP-8 casing was damaged and not sampled on 11/16/06.

Table 2
Summary of Analytical Results for Ground Water Samples at UST No. 9
Former Appliance Park East Facility, Columbia, Maryland

Well ID	OBG-17																					
Analytes (ug/L)	**11/11/96**	**11/24/97**	**01/20/98**	**05/14/98**	**10/29/98**	**04/29/99**	**10/28/99**	**04/27/00**	**10/26/00**	**05/01/01**	**10/18/01**	**05/09/02**	**10/24/02**	**11/10/04**	**11/16/06**	**11/07/08**	**11/15/10**	**10/23/12**	**10/22/14**	**11/01/16**	**05/02/18**
Benzene	<1	< 1	< 1	< 1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	<1	< 1	< 1	< 1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1	< 1	< 1	< 1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylene	<3	< 3	< 3	< 3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
MTBE	<1	< 1	< 1	< 1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Field Measurements																					
pH (standard units)	---	---	5.21	5.34	5.02	5.56	5.70	5.21	5.18	5.37	6.00	5.60	5.28	5.92	5.12	5.51	5.66	6.19	6.09	7.45	5.66
Conductivity*	---	---	291	440	542	336	321	654	440	355	217	208	214	588	638	655	741	649	839	790	640
Temperature (Celsius)	---	---	12.2	13.1	17.9	13.0	15.7	10.6	15.6	15.1	14.1	14.7	13.83	15.2	15.8	18.6	15.5	16.3	14.99	15.8	12.5

Well ID	OBG-18																				
Analytes (ug/L)	**11/12/96**	**11/24/97**	**01/20/98**	**05/14/98**	**5/14/98 PE**	**10/29/98**	**04/29/99**	**10/28/99**	**04/27/00**	**10/26/00**	**05/01/01**	**10/18/01**	**05/09/02**	**10/24/02**	**11/10/04**	**11/16/06**	**11/07/08**	**11/15/10**	**10/23/12**	**10/22/14**	**11/01/16**	**05/02/18**
Benzene	<1	< 1	< 1	< 1	< 1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	<1	< 1	< 1	< 1	< 1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	<1	< 1	< 1	< 1	< 1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylene	<3	< 3	< 3	< 3	< 3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
MTBE	<1	< 1	< 1	< 1	< 1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Field Measurements																						
pH (standard units)	---	---	5.42	5.22	---	4.95	5.38	5.35	5.41	5.61	5.60	6.00	5.93	5.4	6.71	6.05	5.93	5.67	6.13	6.33	7.5	6.52
Conductivity*	---	---	223	240	---	287	317	293	199	190	222	153	149	168	260	161	221	287	300	284	200	432
Temperature (Celsius)	---	---	9.2	15.1	---	17	14.3	17.1	10.8	16.7	12.3	17.4	13.5	14.2	12.8	16.8	18.8	16.9	18.3	16.6	16.4	11.6

Purge Water Sample	Drum S-1													
Analytes (ug/L)	**04/27/00**	**10/26/00**	**05/01/01**	**10/18/01**	**05/09/02**	**10/24/02**	**11/10/04**	**11/16/06**	**11/07/08**	**11/15/10**	**10/23/12**	**10/22/14**	**11/01/16**	**05/02/18**
Benzene	87	48	79	13	8.3	13.4	7.2	6.5	1.3	1.9	1.8	<1	<1	<1
Toluene	200	160	150	150	76	69	220	280	35	16	3.1	3.2	<1	1.3
Ethylbenzene	410	330	270	320	270	272	320	370	180	130	38	111	40.3	28.3
Xylene	1,600	1,200	900	970	940	917	920	890	460	350	130	258	67.9	39.3
MTBE	---	---	---	---	---	---	---	<10	---	---	---	---	---	---

Notes:

ug/L - micrograms per liter
MTBE - Methyl tertiary-butyl ether
BMQL - Below Method Quantitation Limit
< signifies not detected at the detection limit.
* micromhos per second.
(a) TP-170 is a blind field duplicate of TP-7.
Analyses performed by Pace Analytical Services, Inc. by EPA Method SW 846-8260 starting in 2014.
Analyses prior to 2014 performed by Lancaster Laboratories, Inc. using EPA Method SW 846-8021B.
MCLs - Benzene 5 ug/L; Ethylbenzene 700 ug/L; Toluene 1,000 ug/L; Xylenes 10,000 ug/L.
NS - TP-8 casing was damaged and not sampled on 11/16/06.

ATTACHMENT 1

LABORATORY REPORT AND DATA VALIDATION

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

May 08, 2018

Belssi Chang
Tetra Tech GEO
51 Franklin Street
Suite 400
Annapolis, MD 21401

RE: Project: GE Columbia UST-9
Pace Project No.: 30251701

Dear Belssi Chang:
Enclosed are the analytical results for sample(s) received by the laboratory on May 04, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Laura M. Pirilla
laura.pirilla@pacelabs.com
(724)850-5616
Project Manager

Enclosures

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
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CERTIFICATIONS

Project: GE Columbia UST-9
Pace Project No.: 30251701

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

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Greensburg, PA 15601
(724)850-5600

SAMPLE SUMMARY

Project: GE Columbia UST-9
Pace Project No.: 30251701

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30251701001	**OBG-18**	Water	05/02/18 09:10	05/04/18 00:20
30251701002	**ERM-18**	Water	05/02/18 09:50	05/04/18 00:20
30251701003	**OBG-17**	Water	05/02/18 12:00	05/04/18 00:20
30251701004	**TP-7**	Water	05/02/18 10:55	05/04/18 00:20
30251701005	**TP-170**	Water	05/02/18 11:05	05/04/18 00:20
30251701006	**TP-7EB**	Water	05/02/18 11:10	05/04/18 00:20
30251701007	**TP-6**	Water	05/02/18 13:00	05/04/18 00:20
30251701008	**TP-11**	Water	05/02/18 09:05	05/04/18 00:20
30251701009	**TP-8**	Water	05/02/18 10:05	05/04/18 00:20
30251701010	**ERM-4**	Water	05/02/18 11:07	05/04/18 00:20
30251701011	**ERM-7**	Water	05/02/18 12:10	05/04/18 00:20
30251701012	**ERM-6**	Water	05/02/18 13:15	05/04/18 00:20
30251701013	**DRUM S-1**	Water	05/02/18 14:00	05/04/18 00:20
30251701014	**Trip Blank**	Water	05/02/18 00:01	05/04/18 00:20

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SAMPLE ANALYTE COUNT

Project: GE Columbia UST-9
Pace Project No.: 30251701

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30251701001	**OBG-18**	EPA 8260B	MAK	9	PASI-PA
30251701002	**ERM-18**	EPA 8260B	MAK	9	PASI-PA
30251701003	**OBG-17**	EPA 8260B	MAK	9	PASI-PA
30251701004	**TP-7**	EPA 8260B	MAK	9	PASI-PA
30251701005	**TP-170**	EPA 8260B	MAK	9	PASI-PA
30251701006	**TP-7EB**	EPA 8260B	MAK	9	PASI-PA
30251701007	**TP-6**	EPA 8260B	MAK	9	PASI-PA
30251701008	**TP-11**	EPA 8260B	MAK	9	PASI-PA
30251701009	**TP-8**	EPA 8260B	MAK	9	PASI-PA
30251701010	**ERM-4**	EPA 8260B	MAK	9	PASI-PA
30251701011	**ERM-7**	EPA 8260B	MAK	9	PASI-PA
30251701012	**ERM-6**	EPA 8260B	MAK	9	PASI-PA
30251701013	**DRUM S-1**	EPA 8260B	MAK	8	PASI-PA
30251701014	**Trip Blank**	EPA 8260B	MAK	9	PASI-PA

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PROJECT NARRATIVE

Project: GE Columbia UST-9
Pace Project No.: 30251701

Method: **EPA 8260B**
Description: 8260B MSV
Client: TetraTech GEO
Date: May 08, 2018

General Information:
14 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: GE Columbia UST-9
Pace Project No.: 30251701

Sample: OBG-18 **Lab ID: 30251701001** Collected: 05/02/18 09:10 Received: 05/04/18 00:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B								
Benzene	**<1.0**	ug/L	1.0	0.24	1		05/07/18 15:40	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	0.31	1		05/07/18 15:40	100-41-4	
Methyl-tert-butyl ether	**<1.0**	ug/L	1.0	0.23	1		05/07/18 15:40	1634-04-4	
Toluene	**<1.0**	ug/L	1.0	0.30	1		05/07/18 15:40	108-88-3	
Xylene (Total)	**<3.0**	ug/L	3.0	0.78	1		05/07/18 15:40	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	79-129		1		05/07/18 15:40	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	80-120		1		05/07/18 15:40	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		05/07/18 15:40	2037-26-5	
Dibromofluoromethane (S)	100	%	80-120		1		05/07/18 15:40	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: GE Columbia UST-9
Pace Project No.: 30251701

Sample: ERM-18 **Lab ID: 30251701002** Collected: 05/02/18 09:50 Received: 05/04/18 00:20 Matrix: Water

Comments: • Some headspace was present in all vials provided for this sample.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B								
Benzene	**<1.0**	ug/L	1.0	0.24	1		05/07/18 16:05	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	0.31	1		05/07/18 16:05	100-41-4	
Methyl-tert-butyl ether	**<1.0**	ug/L	1.0	0.23	1		05/07/18 16:05	1634-04-4	
Toluene	**<1.0**	ug/L	1.0	0.30	1		05/07/18 16:05	108-88-3	
Xylene (Total)	**<3.0**	ug/L	3.0	0.78	1		05/07/18 16:05	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	79-129		1		05/07/18 16:05	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-120		1		05/07/18 16:05	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		05/07/18 16:05	2037-26-5	
Dibromofluoromethane (S)	102	%	80-120		1		05/07/18 16:05	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: GE Columbia UST-9
Pace Project No.: 30251701

Sample: OBG-17 **Lab ID: 30251701003** Collected: 05/02/18 12:00 Received: 05/04/18 00:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B								
Benzene	**<1.0**	ug/L	1.0	0.24	1		05/07/18 16:30	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	0.31	1		05/07/18 16:30	100-41-4	
Methyl-tert-butyl ether	**<1.0**	ug/L	1.0	0.23	1		05/07/18 16:30	1634-04-4	
Toluene	**<1.0**	ug/L	1.0	0.30	1		05/07/18 16:30	108-88-3	
Xylene (Total)	**<3.0**	ug/L	3.0	0.78	1		05/07/18 16:30	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	79-129		1		05/07/18 16:30	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	80-120		1		05/07/18 16:30	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		05/07/18 16:30	2037-26-5	
Dibromofluoromethane (S)	105	%	80-120		1		05/07/18 16:30	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: GE Columbia UST-9
Pace Project No.: 30251701

Sample: TP-7 **Lab ID: 30251701004** Collected: 05/02/18 10:55 Received: 05/04/18 00:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B								
Benzene	**<1.0**	ug/L	1.0	0.24	1		05/07/18 16:55	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	0.31	1		05/07/18 16:55	100-41-4	
Methyl-tert-butyl ether	**<1.0**	ug/L	1.0	0.23	1		05/07/18 16:55	1634-04-4	
Toluene	**<1.0**	ug/L	1.0	0.30	1		05/07/18 16:55	108-88-3	
Xylene (Total)	**<3.0**	ug/L	3.0	0.78	1		05/07/18 16:55	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	79-129		1		05/07/18 16:55	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	80-120		1		05/07/18 16:55	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		05/07/18 16:55	2037-26-5	
Dibromofluoromethane (S)	105	%	80-120		1		05/07/18 16:55	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: GE Columbia UST-9
Pace Project No.: 30251701

Sample: TP-170 **Lab ID: 30251701005** Collected: 05/02/18 11:05 Received: 05/04/18 00:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B								
Benzene	**<1.0**	ug/L	1.0	0.24	1		05/07/18 17:21	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	0.31	1		05/07/18 17:21	100-41-4	
Methyl-tert-butyl ether	**<1.0**	ug/L	1.0	0.23	1		05/07/18 17:21	1634-04-4	
Toluene	**<1.0**	ug/L	1.0	0.30	1		05/07/18 17:21	108-88-3	
Xylene (Total)	**<3.0**	ug/L	3.0	0.78	1		05/07/18 17:21	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	79-129		1		05/07/18 17:21	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	80-120		1		05/07/18 17:21	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		05/07/18 17:21	2037-26-5	
Dibromofluoromethane (S)	105	%	80-120		1		05/07/18 17:21	1868-53-7	

REPORT OF LABORATORY ANALYSIS

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(724)850-5600

ANALYTICAL RESULTS

Project: GE Columbia UST-9
Pace Project No.: 30251701

Sample: TP-7EB **Lab ID: 30251701006** Collected: 05/02/18 11:10 Received: 05/04/18 00:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B								
Benzene	**<1.0**	ug/L	1.0	0.24	1		05/07/18 17:46	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	0.31	1		05/07/18 17:46	100-41-4	
Methyl-tert-butyl ether	**<1.0**	ug/L	1.0	0.23	1		05/07/18 17:46	1634-04-4	
Toluene	**<1.0**	ug/L	1.0	0.30	1		05/07/18 17:46	108-88-3	
Xylene (Total)	**<3.0**	ug/L	3.0	0.78	1		05/07/18 17:46	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	79-129		1		05/07/18 17:46	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	80-120		1		05/07/18 17:46	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		05/07/18 17:46	2037-26-5	
Dibromofluoromethane (S)	105	%	80-120		1		05/07/18 17:46	1868-53-7	

REPORT OF LABORATORY ANALYSIS

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1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: GE Columbia UST-9
Pace Project No.: 30251701

Sample: TP-6 **Lab ID: 30251701007** Collected: 05/02/18 13:00 Received: 05/04/18 00:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B								
Benzene	**<1.0**	ug/L	1.0	0.24	1		05/07/18 18:11	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	0.31	1		05/07/18 18:11	100-41-4	
Methyl-tert-butyl ether	**<1.0**	ug/L	1.0	0.23	1		05/07/18 18:11	1634-04-4	
Toluene	**<1.0**	ug/L	1.0	0.30	1		05/07/18 18:11	108-88-3	
Xylene (Total)	**<3.0**	ug/L	3.0	0.78	1		05/07/18 18:11	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	79-129		1		05/07/18 18:11	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	80-120		1		05/07/18 18:11	17060-07-0	
Toluene-d8 (S)	96	%	80-120		1		05/07/18 18:11	2037-26-5	
Dibromofluoromethane (S)	105	%	80-120		1		05/07/18 18:11	1868-53-7	

REPORT OF LABORATORY ANALYSIS

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1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: GE Columbia UST-9
Pace Project No.: 30251701

Sample: TP-11 **Lab ID: 30251701008** Collected: 05/02/18 09:05 Received: 05/04/18 00:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B								
Benzene	**<1.0**	ug/L	1.0	0.24	1		05/07/18 18:36	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	0.31	1		05/07/18 18:36	100-41-4	
Methyl-tert-butyl ether	**<1.0**	ug/L	1.0	0.23	1		05/07/18 18:36	1634-04-4	
Toluene	**<1.0**	ug/L	1.0	0.30	1		05/07/18 18:36	108-88-3	
Xylene (Total)	**<3.0**	ug/L	3.0	0.78	1		05/07/18 18:36	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	79-129		1		05/07/18 18:36	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	80-120		1		05/07/18 18:36	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		05/07/18 18:36	2037-26-5	
Dibromofluoromethane (S)	103	%	80-120		1		05/07/18 18:36	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: GE Columbia UST-9
Pace Project No.: 30251701

Sample: TP-8 **Lab ID: 30251701009** Collected: 05/02/18 10:05 Received: 05/04/18 00:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B								
Benzene	**<1.0**	ug/L	1.0	0.24	1		05/07/18 19:01	71-43-2	
Ethylbenzene	**18.7**	ug/L	1.0	0.31	1		05/07/18 19:01	100-41-4	
Methyl-tert-butyl ether	**<1.0**	ug/L	1.0	0.23	1		05/07/18 19:01	1634-04-4	
Toluene	**<1.0**	ug/L	1.0	0.30	1		05/07/18 19:01	108-88-3	
Xylene (Total)	**33.5**	ug/L	3.0	0.78	1		05/07/18 19:01	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%	79-129		1		05/07/18 19:01	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	80-120		1		05/07/18 19:01	17060-07-0	
Toluene-d8 (S)	102	%	80-120		1		05/07/18 19:01	2037-26-5	
Dibromofluoromethane (S)	101	%	80-120		1		05/07/18 19:01	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: GE Columbia UST-9
Pace Project No.: 30251701

Sample: ERM-4 **Lab ID: 30251701010** Collected: 05/02/18 11:07 Received: 05/04/18 00:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B								
Benzene	**<1.0**	ug/L	1.0	0.24	1		05/07/18 19:26	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	0.31	1		05/07/18 19:26	100-41-4	
Methyl-tert-butyl ether	**<1.0**	ug/L	1.0	0.23	1		05/07/18 19:26	1634-04-4	
Toluene	**<1.0**	ug/L	1.0	0.30	1		05/07/18 19:26	108-88-3	
Xylene (Total)	**<3.0**	ug/L	3.0	0.78	1		05/07/18 19:26	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	79-129		1		05/07/18 19:26	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	80-120		1		05/07/18 19:26	17060-07-0	
Toluene-d8 (S)	99	%	80-120		1		05/07/18 19:26	2037-26-5	
Dibromofluoromethane (S)	105	%	80-120		1		05/07/18 19:26	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: GE Columbia UST-9
Pace Project No.: 30251701

Sample: ERM-7 **Lab ID: 30251701011** Collected: 05/02/18 12:10 Received: 05/04/18 00:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B								
Benzene	**<1.0**	ug/L	1.0	0.24	1		05/07/18 19:51	71-43-2	
Ethylbenzene	**46.4**	ug/L	1.0	0.31	1		05/07/18 19:51	100-41-4	
Methyl-tert-butyl ether	**<1.0**	ug/L	1.0	0.23	1		05/07/18 19:51	1634-04-4	
Toluene	**4.5**	ug/L	1.0	0.30	1		05/07/18 19:51	108-88-3	
Xylene (Total)	**31.2**	ug/L	3.0	0.78	1		05/07/18 19:51	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	79-129		1		05/07/18 19:51	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	80-120		1		05/07/18 19:51	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		05/07/18 19:51	2037-26-5	
Dibromofluoromethane (S)	103	%	80-120		1		05/07/18 19:51	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: GE Columbia UST-9
Pace Project No.: 30251701

Sample: ERM-6 **Lab ID: 30251701012** Collected: 05/02/18 13:15 Received: 05/04/18 00:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B								
Benzene	**<1.0**	ug/L	1.0	0.24	1		05/07/18 20:17	71-43-2	
Ethylbenzene	**56.1**	ug/L	1.0	0.31	1		05/07/18 20:17	100-41-4	
Methyl-tert-butyl ether	**<1.0**	ug/L	1.0	0.23	1		05/07/18 20:17	1634-04-4	
Toluene	**<1.0**	ug/L	1.0	0.30	1		05/07/18 20:17	108-88-3	
Xylene (Total)	**93.8**	ug/L	3.0	0.78	1		05/07/18 20:17	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	79-129		1		05/07/18 20:17	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	80-120		1		05/07/18 20:17	17060-07-0	
Toluene-d8 (S)	105	%	80-120		1		05/07/18 20:17	2037-26-5	
Dibromofluoromethane (S)	102	%	80-120		1		05/07/18 20:17	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: GE Columbia UST-9
Pace Project No.: 30251701

Sample: DRUM S-1 **Lab ID: 30251701013** Collected: 05/02/18 14:00 Received: 05/04/18 00:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B								
Benzene	**<1.0**	ug/L	1.0	0.24	1		05/07/18 20:42	71-43-2	
Ethylbenzene	**28.3**	ug/L	1.0	0.31	1		05/07/18 20:42	100-41-4	
Toluene	**1.3**	ug/L	1.0	0.30	1		05/07/18 20:42	108-88-3	
Xylene (Total)	**39.3**	ug/L	3.0	0.78	1		05/07/18 20:42	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	79-129		1		05/07/18 20:42	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	80-120		1		05/07/18 20:42	17060-07-0	
Toluene-d8 (S)	102	%	80-120		1		05/07/18 20:42	2037-26-5	
Dibromofluoromethane (S)	103	%	80-120		1		05/07/18 20:42	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS

Project: GE Columbia UST-9
Pace Project No.: 30251701

Sample: Trip Blank **Lab ID: 30251701014** Collected: 05/02/18 00:01 Received: 05/04/18 00:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV	Analytical Method: EPA 8260B								
Benzene	**<1.0**	ug/L	1.0	0.24	1		05/07/18 15:14	71-43-2	
Ethylbenzene	**<1.0**	ug/L	1.0	0.31	1		05/07/18 15:14	100-41-4	
Methyl-tert-butyl ether	**<1.0**	ug/L	1.0	0.23	1		05/07/18 15:14	1634-04-4	
Toluene	**<1.0**	ug/L	1.0	0.30	1		05/07/18 15:14	108-88-3	
Xylene (Total)	**<3.0**	ug/L	3.0	0.78	1		05/07/18 15:14	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	103	%	79-129		1		05/07/18 15:14	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	80-120		1		05/07/18 15:14	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		05/07/18 15:14	2037-26-5	
Dibromofluoromethane (S)	102	%	80-120		1		05/07/18 15:14	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA

Project: GE Columbia UST-9
Pace Project No.: 30251701

QC Batch: 297326 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV
Associated Lab Samples: 30251701001, 30251701002, 30251701003, 30251701004, 30251701005, 30251701006, 30251701007, 30251701008, 30251701009, 30251701010, 30251701011, 30251701012, 30251701013, 30251701014

METHOD BLANK: 1455517 Matrix: Water
Associated Lab Samples: 30251701001, 30251701002, 30251701003, 30251701004, 30251701005, 30251701006, 30251701007, 30251701008, 30251701009, 30251701010, 30251701011, 30251701012, 30251701013, 30251701014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Benzene	ug/L	<1.0	1.0	0.24	05/07/18 13:34	
Ethylbenzene	ug/L	<1.0	1.0	0.31	05/07/18 13:34	
Methyl-tert-butyl ether	ug/L	<1.0	1.0	0.23	05/07/18 13:34	
Toluene	ug/L	<1.0	1.0	0.30	05/07/18 13:34	
Xylene (Total)	ug/L	<3.0	3.0	0.78	05/07/18 13:34	
1,2-Dichloroethane-d4 (S)	%	105	80-120		05/07/18 13:34	
4-Bromofluorobenzene (S)	%	104	79-129		05/07/18 13:34	
Dibromofluoromethane (S)	%	106	80-120		05/07/18 13:34	
Toluene-d8 (S)	%	99	80-120		05/07/18 13:34	

LABORATORY CONTROL SAMPLE: 1455518

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	18.5	92	70-130	
Ethylbenzene	ug/L	20	18.7	94	70-130	
Methyl-tert-butyl ether	ug/L	20	20.3	101	70-130	
Toluene	ug/L	20	18.6	93	70-130	
Xylene (Total)	ug/L	60	55.7	93	70-130	
1,2-Dichloroethane-d4 (S)	%			104	80-120	
4-Bromofluorobenzene (S)	%			104	79-129	
Dibromofluoromethane (S)	%			107	80-120	
Toluene-d8 (S)	%			101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1455606 1455607

Parameter	Units	30251701001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	<1.0	20	20	17.9	17.4	89	87	67-121	3	30	
Ethylbenzene	ug/L	<1.0	20	20	17.8	17.4	89	87	70-127	3	30	
Methyl-tert-butyl ether	ug/L	<1.0	20	20	19.4	18.7	97	93	79-135	4	30	
Toluene	ug/L	<1.0	20	20	18.4	17.3	92	86	77-125	6	30	
Xylene (Total)	ug/L	<3.0	60	60	52.8	50.5	88	84	69-128	4	30	
1,2-Dichloroethane-d4 (S)	%						101	102	80-120			
4-Bromofluorobenzene (S)	%						102	103	79-129			
Dibromofluoromethane (S)	%						108	108	80-120			
Toluene-d8 (S)	%						100	100	80-120			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: GE Columbia UST-9
Pace Project No.: 30251701

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-PA Pace Analytical Services - Greensburg

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GE Columbia UST-9
Pace Project No.: 30251701

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30251701001	**OBG-18**	EPA 8260B	297326		
30251701002	**ERM-18**	EPA 8260B	297326		
30251701003	**OBG-17**	EPA 8260B	297326		
30251701004	**TP-7**	EPA 8260B	297326		
30251701005	**TP-170**	EPA 8260B	297326		
30251701006	**TP-7EB**	EPA 8260B	297326		
30251701007	**TP-6**	EPA 8260B	297326		
30251701008	**TP-11**	EPA 8260B	297326		
30251701009	**TP-8**	EPA 8260B	297326		
30251701010	**ERM-4**	EPA 8260B	297326		
30251701011	**ERM-7**	EPA 8260B	297326		
30251701012	**ERM-6**	EPA 8260B	297326		
30251701013	**DRUM S-1**	EPA 8260B	297326		
30251701014	**Trip Blank**	EPA 8260B	297326		

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CHAIN-OF-CU WO# : 30251701

The Chain-of-Custody is a

30251701

Page: 1 of 2

2226809

Section A
Required Client Information:

Company: TetraTech GEO
Address:
Email To: Belssi.chang@tetratech.com
Phone: 410990-4607 Fax: 410990-4749
Requested Due Date/TAT:

Section B
Required Project Information:

Report To: Belssi Chang
Copy To:
Purchase Order No.:
Project Name: GE Columbia UST-9
Project Number:

Attention: Belssi Chang
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY

NPDES | GROUND WATER | DRINKING WATER
UST | RCRA | OTHER

Site Location STATE: MD

Section D
Required Client Information

Matrix Codes (MATRIX / CODE): Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Tissue TS, Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	Composite Start DATE	Composite Start TIME	Composite End/Grab DATE (2018)	Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	BTEX & MTBE 8260	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	OBG-18					5-2	0910		3				X					X		001
2	ERM-18						0956		3				X					X		002
3	OBG-17						1200		3				X					X		003
4	TP-7						1055		3				X					X		004
5	TP-170						1105		3				X					X		005
6	TP-7EB						1110		3				X					X		006
7	TP-6						1300		3				X					X		007
8	TP-11						0905		3				X					X		008
9	TP-8						1005		3				X					X		009
10	ERM-4						1107		3				X					X		010
11	ERM-7						1210		3				X					X		011
12	ERM-6						1315		3				X					X		012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
-No data package required	* Didn't sign - ND present			David [signature] / Pace	5/3/18	1450				
-Required LOQs: 3ug/L for xylenes	David [signature] / Pace	5/3/18	2011	[signature]	5-3-18	2030				
1ug/L for all other compounds	[signature]	5-4-18	0020	[signature]	5-4-18	0020	3.3	Y	N	Y
-Report "ND" if result is <LOQ										

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER:
SIGNATURE of SAMPLER:
DATE Signed (MM/DD/YY):

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

30251701

Page: of
2226808

Section A
Required Client Information:

Company: TetraTech GEO
Address:
Email To: Belssi.chang@tetratech.com
Phone: 410990-4607 Fax: 4109904749
Requested Due Date/TAT:

Section B
Required Project Information:

Report To: Belssi Chang
Copy To:
Purchase Order No.:
Project Name: GE Columbia UST-9
Project Number:

Section C
Invoice Information:

Attention: Belssi Chang
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: MD

Section D
Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes
MATRIX / CODE
Drinking Water DW
Water WT
Waste Water WW
Product P
Soil/Solid SL
Oil OL
Wipe WP
Air AR
Tissue TS
Other OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE (2018)	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	BTEX & MTBE 8260	BTEX	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	DRUM S-1					5-2	1400		3				X							X		013
2	Trip blank								2				X						X			014
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
-No data package required	Didn't sign No one present DLH			David L Hallogan Pace	5/3/18	1450				
-Required LOQ's: 3 ug/L For Xylenes;	David L Hallogan Pace	5/3/18	2011	[signature]	5-3-18	2030				
1ug/L For all other compounds	[signature]	5/4/18	0020	[signature]	5/4/18	0020	3.3	Y	N	Y
-Report "ND" if result is <LOQ							Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER:
SIGNATURE of SAMPLER:
DATE Signed (MM/DD/YY):

F-ALL-Q-020rev.07, 15-May-2007

Pittsburgh Lab Sample Condition Upon Receipt

Face Analytical

Client Name: TetraTech GEO

Project # 302517013

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace Other _____

Label MJS

LIMS Login SAM

Tracking #: N-A

Custody Seal on Cooler/Box Present: ☐ yes ☐ no Seals intact: ☐ yes ☐ no

Thermometer Used 6 Type of Ice: Wet Blue None

Cooler Temperature Observed Temp 3.2 °C Correction Factor: +0.1 °C Final Temp: 3.3 °C

Temp should be above freezing to 6°C

pH paper Lot# N-A

Date and Initials of person examining contents: BAH 5-4-18

Comments:	Yes	No	N/A	
Chain of Custody Present:	✓			1.
Chain of Custody Filled Out:	✓			2.
Chain of Custody Relinquished:	✓			3.
Sampler Name & Signature on COC:		✓		4.
Sample Labels match COC: -Includes date/time/ID Matrix: WT	✓			5.
Samples Arrived within Hold Time:	✓			6.
Short Hold Time Analysis (<72hr remaining):		✓		7.
Rush Turn Around Time Requested:		✓		8.
Sufficient Volume:	✓			9.
Correct Containers Used: -Pace Containers Used:	✓			10.
Containers Intact:	✓			11.
Orthophosphate field filtered			✓	12.
Hex Cr Aqueous Compliance/NPDES sample field filtered			✓	13.
Organic Samples checked for dechlorination:			✓	14.
Filtered volume received for Dissolved tests			✓	15.
All containers have been checked for preservation.			✓	16.
All containers needing preservation are found to be in compliance with EPA recommendation. exceptions: VOA, coliform, TOC, O&G, Phenolics			✓	Initial when completed: Date/time of preservation: Lot # of added preservative:
Headspace in VOA Vials (>6mm):	✓			17. X
Trip Blank Present:	✓			18.
Trip Blank Custody Seals Present	✓			
Rad Aqueous Samples Screened > 0.5 mrem/hr			✓	Initial when completed: Date:

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution:

X 3 in sample 2, 2 in sample 3, 1 in sample 4, 2 in sample 5, 1 in 6, 1 in 8, 2 in 9,

☐ **A check in this box indicates that additional information has been stored in ereports.**

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.

TETRA TECH

DATA VALIDATION CHECKLIST – STAGE 3

Site Name	GE Columbia UST-9	**Project No.**	117-2204275
Data Reviewer (signature and date)	Cecelia N. Munck 7/24/18	**Technical Reviewer (signature and date)**	Debbie Kuhl 7/27/18
Laboratory Report No.	30251701	**Laboratory**	Pace Analytical
Analyses	Select Volatile Organic Compounds by SW-846 Method 8260B		
Samples	OBG-18, ERM-18, OBG-17,TP-6, TP-11, TP-8, ERM-4, ERM-7, ERM-6, DRUM S-1		
Field Duplicate Pairs	TP-7 and TP-170		
QC Blanks	TP-7EB and Trip Blank		

This checklist summarizes the Stage 3 validation performed on the subject laboratory report, in accordance with the Environmental Protection Agency (EPA) *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (January 2009). Analytical data were evaluated in general accordance with the EPA *Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Organic Superfund Methods Data Review* (January 2017), data validation guidance documents, as well as the above referenced method.

OVERALL EVALUATION:

All results were qualified as rejected (R) for ERM-18 because headspace was present in all vials. The remaining data can be used as received from the laboratory.

Data Completeness:

Within Criteria	Exceedance/Notes
Y	

Sample Preservation, Receipt, and Holding Times:

Within Criteria	Exceedance/Notes
N	Identification and signature of the sampler were missing from the chains of custody (COC). Sample matrix was not entered on the COC. Sample ERM-18 contained headspace in all three (3) vials. All non-detects for this sample were qualified as rejected (flagged R). The laboratory documented that at least one (1) vial of samples OBG-17, TP-7, TP-170, TP-7EB, TP-11 and TP-8 contained air bubbles >6mm. No qualifications were required since one (1) vial without headspace was available for analysis.

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TETRA TECH

DATA VALIDATION CHECKLIST – STAGE 3

Instrument Performance Checks:

Within Criteria	Exceedance/Notes
Y	

Initial Calibration:

Within Criteria	Exceedance/Notes
Y	

Initial Calibration Verification:

Within Criteria	Exceedance/Notes
Y	

Continuing Calibration:

Within Criteria	Exceedance/Notes
Y	

Method Blanks:

Within Criteria	Exceedance/Notes
Y	

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DATA VALIDATION CHECKLIST – STAGE 3

QC Blanks:

Within Criteria	Exceedance/Notes
Y	

System Monitoring Compound Recovery (surrogate compounds):

Within Criteria	Exceedance/Notes
Y	

MS/MSD:

Within Criteria	Exceedance/Notes
Y	

Field Duplicates:

Within Criteria	Exceedance/Notes
Y	

LCS:

Within Criteria	Exceedance/Notes
Y	

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DATA VALIDATION CHECKLIST – STAGE 3

Sample Dilutions:

Within Criteria	Exceedance/Notes
NA	

Re-extraction and Reanalysis:

Within Criteria	Exceedance/Notes
NA	

Internal Standards:

Within Criteria	Exceedance/Notes
Y	

Target Analyte Identification:

Within Criteria	Exceedance/Notes
Y	

Analyte Quantitation and MDLs/RLs:

Within Criteria	Exceedance/Notes
Y	

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DATA VALIDATION CHECKLIST – STAGE 3

Tentatively Identified Compounds:

Within Criteria	Exceedance/Notes
NA	

System Performance and Instrument Stability:

Within Criteria	
Y	

Overall Qualifications:

See results summary pages attached for changes to the laboratory qualifiers based upon this validation. The following is a list of qualifiers and definitions that may be used for the validation of this data package:

J	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
J+	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased high.
J-	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased low.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated value is the approximate concentration of the analyte in the sample.
R	The sample result is rejected as unusable due to serious deficiencies in one or more quality control criteria. The analyte may or may not be present in the sample.
U	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit).
UJ	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit), which is considered approximate due to deficiencies in one or more quality control criteria.

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Analytical Results for Groundwater Samples
Former UST-9 Area, Former Appliance Park East Facility, Columbia, Maryland

Sample_No	Samp_Date	Parameter	Units	Final Result	Final Qualifier
OBG-18	05/02/2018	BENZENE	UG/L	<1.0	U
OBG-18	05/02/2018	ETHYLBENZENE	UG/L	<1.0	U
OBG-18	05/02/2018	METHYL-TERT-BUTYL ETHER	UG/L	<1.0	U
OBG-18	05/02/2018	TOLUENE	UG/L	<1.0	U
OBG-18	05/02/2018	XYLENE (TOTAL)	UG/L	<3.0	U
ERM-18	**05/02/2018**	**BENZENE**	**UG/L**	**<1.0**	**R**
ERM-18	**05/02/2018**	**ETHYLBENZENE**	**UG/L**	**<1.0**	**R**
ERM-18	**05/02/2018**	**METHYL-TERT-BUTYL ETHER**	**UG/L**	**<1.0**	**R**
ERM-18	**05/02/2018**	**TOLUENE**	**UG/L**	**<1.0**	**R**
ERM-18	**05/02/2018**	**XYLENE (TOTAL)**	**UG/L**	**<3.0**	**R**
OBG-17	05/02/2018	BENZENE	UG/L	<1.0	U
OBG-17	05/02/2018	ETHYLBENZENE	UG/L	<1.0	U
OBG-17	05/02/2018	METHYL-TERT-BUTYL ETHER	UG/L	<1.0	U
OBG-17	05/02/2018	TOLUENE	UG/L	<1.0	U
OBG-17	05/02/2018	XYLENE (TOTAL)	UG/L	<3.0	U
TP-7	05/02/2018	BENZENE	UG/L	<1.0	U
TP-7	05/02/2018	ETHYLBENZENE	UG/L	<1.0	U
TP-7	05/02/2018	METHYL-TERT-BUTYL ETHER	UG/L	<1.0	U
TP-7	05/02/2018	TOLUENE	UG/L	<1.0	U
TP-7	05/02/2018	XYLENE (TOTAL)	UG/L	<3.0	U
TP-170	05/02/2018	BENZENE	UG/L	<1.0	U
TP-170	05/02/2018	ETHYLBENZENE	UG/L	<1.0	U
TP-170	05/02/2018	METHYL-TERT-BUTYL ETHER	UG/L	<1.0	U
TP-170	05/02/2018	TOLUENE	UG/L	<1.0	U
TP-170	05/02/2018	XYLENE (TOTAL)	UG/L	<3.0	U
TP-7EB	05/02/2018	BENZENE	UG/L	<1.0	U
TP-7EB	05/02/2018	ETHYLBENZENE	UG/L	<1.0	U
TP-7EB	05/02/2018	METHYL-TERT-BUTYL ETHER	UG/L	<1.0	U
TP-7EB	05/02/2018	TOLUENE	UG/L	<1.0	U
TP-7EB	05/02/2018	XYLENE (TOTAL)	UG/L	<3.0	U
TP-6	05/02/2018	BENZENE	UG/L	<1.0	U
TP-6	05/02/2018	ETHYLBENZENE	UG/L	<1.0	U
TP-6	05/02/2018	METHYL-TERT-BUTYL ETHER	UG/L	<1.0	U
TP-6	05/02/2018	TOLUENE	UG/L	<1.0	U
TP-6	05/02/2018	XYLENE (TOTAL)	UG/L	<3.0	U
TP-11	05/02/2018	BENZENE	UG/L	<1.0	U
TP-11	05/02/2018	ETHYLBENZENE	UG/L	<1.0	U
TP-11	05/02/2018	METHYL-TERT-BUTYL ETHER	UG/L	<1.0	U
TP-11	05/02/2018	TOLUENE	UG/L	<1.0	U
TP-11	05/02/2018	XYLENE (TOTAL)	UG/L	<3.0	U
TP-8	05/02/2018	BENZENE	UG/L	<1.0	U
TP-8	**05/02/2018**	**ETHYLBENZENE**	**UG/L**	**18.7**	
TP-8	05/02/2018	METHYL-TERT-BUTYL ETHER	UG/L	<1.0	U
TP-8	05/02/2018	TOLUENE	UG/L	<1.0	U
TP-8	**05/02/2018**	**XYLENE (TOTAL)**	**UG/L**	**33.5**	
ERM-4	05/02/2018	BENZENE	UG/L	<1.0	U
ERM-4	05/02/2018	ETHYLBENZENE	UG/L	<1.0	U

Analytical Results for Groundwater Samples
Former UST-9 Area, Former Appliance Park East Facility, Columbia, Maryland

Sample_No	Samp_Date	Parameter	Units	Final Result	Final Qualifier
ERM-4	05/02/2018	METHYL-TERT-BUTYL ETHER	UG/L	<1.0	U
ERM-4	05/02/2018	TOLUENE	UG/L	<1.0	U
ERM-4	05/02/2018	XYLENE (TOTAL)	UG/L	<3.0	U
ERM-7	05/02/2018	BENZENE	UG/L	<1.0	U
ERM-7	**05/02/2018**	**ETHYLBENZENE**	**UG/L**	**46.4**	
ERM-7	05/02/2018	METHYL-TERT-BUTYL ETHER	UG/L	<1.0	U
ERM-7	**05/02/2018**	**TOLUENE**	**UG/L**	**4.5**	
ERM-7	**05/02/2018**	**XYLENE (TOTAL)**	**UG/L**	**31.2**	
ERM-6	05/02/2018	BENZENE	UG/L	<1.0	U
ERM-6	**05/02/2018**	**ETHYLBENZENE**	**UG/L**	**56.1**	
ERM-6	05/02/2018	METHYL-TERT-BUTYL ETHER	UG/L	<1.0	U
ERM-6	05/02/2018	TOLUENE	UG/L	<1.0	U
ERM-6	**05/02/2018**	**XYLENE (TOTAL)**	**UG/L**	**93.8**	
DRUM S-1	05/02/2018	BENZENE	UG/L	<1.0	U
DRUM S-1	05/02/2018	ETHYLBENZENE	UG/L	28.3	
DRUM S-1	05/02/2018	TOLUENE	UG/L	1.3	
DRUM S-1	05/02/2018	XYLENE (TOTAL)	UG/L	39.3	
TRIP BLANK	05/02/2018	BENZENE	UG/L	<1.0	U
TRIP BLANK	05/02/2018	ETHYLBENZENE	UG/L	<1.0	U
TRIP BLANK	05/02/2018	METHYL-TERT-BUTYL ETHER	UG/L	<1.0	U
TRIP BLANK	05/02/2018	TOLUENE	UG/L	<1.0	U
TRIP BLANK	05/02/2018	XYLENE (TOTAL)	UG/L	<3.0	U

ATTACHMENT 2

GROUNDWATER SAMPLING FORMS

5-2-18 GE UST-9

0630 - Dave Seaman & Chuck Drevo
- Sunny 70°
- Task Bi-Annual groundwater Sampling.
- Reviewed HASP
* Calibrate YSI-556 Pine # 035554

PH	4.0 = 4.0	
	7.0 = 7.0	
	10.0 = 10.0	
Conductivity	1.413 = 1.413	ms/cm
Temp°	15.10°C	

* YSI-556 Pine # 16512

PH	4.0 = 4.0	
	7.0 = 7.0	
	10.0 = 10.0	
Conductivity ms/cm	1.413 = 1.413	
Temp =	15.28°C	

- Collected Synoptic water levels

Well ID	DTW	DTB
ERM-18	16.51	26.25
OBG-18	12.56	19.91
OBG-17	17.39	20.83
TP-7	23.21	46.75
TP-11	26.88	47.70
TP-6	22.12	43.80
TP-8	24.12	44.70
ERM-4	22.27	31.84
ERM-7	28.81	36.32
ERM-6	22.75	31.62

* Sampled all wells
* Drumed all purge water
* Labeled Drum S-1 with purge water From ERM-6, ERM-7 & TP-8.
  - Collected sample from drum S-1 @ 1400
* All other purge water went into other drum.
* Labeled both drums and left inside Fenced area.
* Completed COC and packed cooler for Pace to pick up tomorrow.

1445 Departed site

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 2

2226809

Section A Required Client Information:

Company: TetraTech GEO
Address:
Email To: Belssi.Chang@tetratech.com
Phone: 410990-4607 Fax: 410990-4749
Requested Due Date/TAT:

Section B Required Project Information:

Report To: Belssi Chang
Copy To:
Purchase Order No.:
Project Name: GE Columbia UST-9
Project Number:

Section C Invoice Information:

Attention: Belssi Chang
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: MD

Section D Required Client Information

Matrix Codes (MATRIX / CODE)

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Requested Analysis Filtered (Y/N): BTEX & MTBE 8260	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	OBG-18					5-2 2018	0910		3				X					Y	X		
2	ERM-18						0950		3				X					Y	X		
3	OBG-17						1200		3				X					Y	X		
4	TP-7						1055		3				X					Y	X		
5	TP-170						1105		3				X					Y	X		
6	TP-7EB						1110		3				X					Y	X		
7	TP-6						1300		3				X					Y	X		
8	TP-11						0905		3				X					Y	X		
9	TP-8						1005		3				X					Y	X		
10	ERM-4						1107		3				X					Y	X		
11	ERM-7						1210		3				X					Y	X		
12	ERM-6						1315		3				X					Y	X		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
No data package required Required LOQs: 3 ug/L For xylenes 1 ug/L For all other compounds Report "ND" if result is < LOQ							

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER:
SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY):

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: of 2226808

Section A Required Client Information:

Company: TetraTech GEO
Address:
Email To: Belssi.Chang@tetratech.com
Phone: 410990-4607 Fax: 4109904749
Requested Due Date/TAT:

Section B Required Project Information:

Report To: Belssi Chang
Copy To:
Purchase Order No.:
Project Name: GE Columbia UST-9
Project Number:

Section C Invoice Information:

Attention: Belssi Chang
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: MD

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: BTEX+MTBE 8260	BTEX	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	DRUM S-1					5-2-2018	1400		3				X						X		
2	Trip blank								2				X					X			
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
No data package required							
Required LOQ's: 3 ug/L for Xylenes; 1 ug/L for all other compounds							
Report "ND" if result is < LOQ							

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER:
SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY):

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

GROUND WATER SAMPLING FORM

1. Date 5-2-18 Sample No. TP-11
2. Location GE UST-9
3. Well No. TP-11
4. Well Depth (ft. below TOC) 47.70
5. Screen Length (ft.) 20'
6. Sampling Crew Dave Seaman
7. Weather: Wind calm Air Temp. 67° Precip. N/A
8. Water Level Measurement (ft. TOC): 26.88
   [Y or N] Well Labeled Y Casing Elev. (ft. MSL): 364.51
   Comments
9. Depth to Hydrocarbon (if present) — Depth to Hydrocarbon/Water Interface — Thickness —
10. Casing Type PVC Diameter 2" Gal/Ft 0.163
11. Total Depth 47.70 - Depth to Water 26.88 = Ht. 20.82
12. Well Volume 3.33 = Ht. 20.82 x Gal/Ft. 0.163
13. Required Purge Volume 9.99 Actual Purge Volume 10 gal.
14. Purge Method/Sampling Method BAILER
15.

	Time	Gallons	Temperature	Conductivity	pH	
Initial	0840	0	12.49	0.424	5.95	
		3.5	12.55	0.405	5.39	
		7.0	12.55	0.407	5.38	
			12.81	0.408	5.40	
Sample	0905	10.0	12.83	0.408	5.41	DTW = 26.92

16. Analytical Methods BTEX, MTBE
17. [Y or N] Turbid? Y Purge Water Containerized? YES
18. QA/QC Samples? NO
19. Reviewed By Dave Sea Date/Time 5-2-18 0910

	ERM-4	ERM-6	ERM-7	TP-7	TP-8	ERM-18	OBG-17	OBG-18	TP-6	TP-11
Well Depth (ft. TOC)	32.0	32.5	37.6	47.3	44.5	27.0	18	20	47.0	48.0
Screen Length (ft.)	20.0	20.0	20.0	20.0	20.0	15.0	10.0	10.0	20.0	20.0
Casing Elev. (ft. MSL)	359.96	360.62	366.3	360.83*	362.14	351.1	351.96	349.14	359.18	364.51
Casing Dia. (in.)	4	4	4	2	2	4	2	2	2	2
Gallons/Foot	0.65	0.65	0.65	0.16	0.16	0.65	0.16	0.16	0.16	0.16

Notes: (*) TP-7 was re-surveyed due to damaged well stick-up in Fall 2000. The elevation shown is the correct elevation.

GROUND WATER SAMPLING FORM

1. Date 5-2-18 Sample No. TP-8
2. Location GE UST-9
3. Well No. TP-8
4. Well Depth (ft. below TOC) 44.70
5. Screen Length (ft.) 20'
6. Sampling Crew Dave Segman
7. Weather: Wind Calm Air Temp. 75° Precip. NONE
8. Water Level Measurement (ft. TOC): 24.12
   [Y or N] Well Labeled Y Casing Elev. (ft. MSL): 362.14
   Comments
9. Depth to Hydrocarbon (if present) — Depth to Hydrocarbon/Water Interface — Thickness —
10. Casing Type PVC Diameter 2" Gal/Ft 0.163
11. Total Depth 44.70' - Depth to Water 24.12 = Ht. 20.58
12. Well Volume 3.29 = Ht. 20.58 x Gal/Ft. 0.163
13. Required Purge Volume 9.87 Actual Purge Volume 10
14. Purge Method/Sampling Method BAILER
15.

	Time	Gallons	Temperature	Conductivity	pH
Initial	0930	0	15.13	0.247	5.62
		3.5	14.44	0.307	5.51
		7.0	14.39	0.329	5.65
Sample	1005	10.0	14.36	0.329	5.68

DTW = 24.14

16. Analytical Methods BTEX, MTBE
17. [Y or N] Turbid? Y Purge Water Containerized? YES
18. QA/QC Samples? NO
19. Reviewed By Dave Sia Date/Time 5-2-18 1010

	ERM-4	ERM-6	ERM-7	TP-7	TP-8	ERM-18	OBG-17	OBG-18	TP-6	TP-11
Well Depth (ft. TOC)	32.0	32.5	37.6	47.3	44.5	27.0	18	20	47.0	48.0
Screen Length (ft.)	20.0	20.0	20.0	20.0	20.0	15.0	10.0	10.0	20.0	20.0
Casing Elev. (ft. MSL)	359.96	360.62	366.3	360.83*	362.14	351.1	351.96	349.14	359.18	364.51
Casing Dia. (in.)	4	4	4	2	2	4	2	2	2	2
Gallons/Foot	0.65	0.65	0.65	0.16	0.16	0.65	0.16	0.16	0.16	0.16

Notes: (*) TP-7 was re-surveyed due to damaged well stick-up in Fall 2000. The elevation shown is the correct elevation.

GROUND WATER SAMPLING FORM

1. Date 5-2-18 Sample No. ERM-4
2. Location GE UST-9
3. Well No. ERM-4
4. Well Depth (ft. below TOC) 31.84
5. Screen Length (ft.) 20'
6. Sampling Crew Dave Seaman
7. Weather: Wind Calm Air Temp. 75° Precip. NONE
8. Water Level Measurement (ft. TOC): 22.27
   [Y or N] Well Labeled Y Casing Elev. (ft. MSL): 359.96
   Comments
9. Depth to Hydrocarbon (if present) — Depth to Hydrocarbon/Water Interface — Thickness —
10. Casing Type PVC Diameter 4" Gal/Ft 0.657
11. Total Depth 31.84 - Depth to Water 22.27 = Ht. 9.57
12. Well Volume 6.41 = Ht. 9.57 x Gal/Ft. 0.657
13. Required Purge Volume 19.24 Actual Purge Volume 20 gal.
14. Purge Method/Sampling Method PUMP
15.

	Time	Gallons	Temperature	Conductivity	pH	
Initial	1025	0	14.73	0.281	6.25	
		6.5	12.83	0.268	5.83	
		13.0	12.86	0.268	5.65	
Sample	1107	20.0	12.87	0.268	5.65	DTW=22.65

16. Analytical Methods BTEX, MTBE
17. [Y or N] Turbid? Y Purge Water Containerized? YES
18. QA/QC Samples? NO
19. Reviewed By Dave Sea Date/Time 5/2/18 1115

	ERM-4	ERM-6	ERM-7	TP-7	TP-8	ERM-18	OBG-17	OBG-18	TP-6	TP-11
Well Depth (ft. TOC)	32.0	32.5	37.6	47.3	44.5	27.0	18	20	47.0	48.0
Screen Length (ft.)	20.0	20.0	20.0	20.0	20.0	15.0	10.0	10.0	20.0	20.0
Casing Elev. (ft. MSL)	359.96	360.62	366.3	360.83*	362.14	351.1	351.96	349.14	359.18	364.51
Casing Dia. (in.)	4	4	4	2	2	4	2	2	2	2
Gallons/Foot	0.65	0.65	0.65	0.16	0.16	0.65	0.16	0.16	0.16	0.16

Notes: (*) TP-7 was re-surveyed due to damaged well stick-up in Fall 2000. The elevation shown is the correct elevation.

GROUND WATER SAMPLING FORM

1. Date 5-2-18 Sample No. ERM-7
2. Location GE UST-9
3. Well No. ERM-7
4. Well Depth (ft. below TOC) 36.32
5. Screen Length (ft.) 20'
6. Sampling Crew Dave Seaman
7. Weather: Wind 5mph Air Temp. 75° Precip. NONE
8. Water Level Measurement (ft. TOC): 28.81
   [Y or N] Well Labeled Y Casing Elev. (ft. MSL): 366.3
   Comments
9. Depth to Hydrocarbon (if present) Depth to Hydrocarbon/Water Interface Thickness
10. Casing Type PVC Diameter 4" Gal/Ft 0.657
11. Total Depth 36.32 - Depth to Water 28.81 = Ht. 7.51
12. Well Volume 5.03 = Ht. 7.51 x Gal/Ft. 0.657
13. Required Purge Volume 15.09 Actual Purge Volume 15.5 gal.
14. Purge Method/Sampling Method PUMP
15.

	Time	Gallons	Temperature	Conductivity	pH	
Initial	1125	0	15.38	0.250	5.83	
		5	14.54	0.212	5.39	
		10	14.55	0.209	5.35	
Sample	1210	15.5	14.57	0.209	5.34	DTW = 29.22

16. Analytical Methods BTEX, MTBE
17. [Y or N] Turbid? N Purge Water Containerized? YES
18. QA/QC Samples? NO
19. Reviewed By Dave Sea Date/Time 5-2-18 1215

	ERM-4	ERM-6	ERM-7	TP-7	TP-8	ERM-18	OBG-17	OBG-18	TP-6	TP-11
Well Depth (ft. TOC)	32.0	32.5	37.6	47.3	44.5	27.0	18	20	47.0	48.0
Screen Length (ft.)	20.0	20.0	20.0	20.0	20.0	15.0	10.0	10.0	20.0	20.0
Casing Elev. (ft. MSL)	359.96	360.62	366.3	360.83*	362.14	351.1	351.96	349.14	359.18	364.51
Casing Dia. (in.)	4	4	4	2	2	4	2	2	2	2
Gallons/Foot	0.65	0.65	0.65	0.16	0.16	0.65	0.16	0.16	0.16	0.16

Notes: (*) TP-7 was re-surveyed due to damaged well stick-up in Fall 2000. The elevation shown is the correct elevation.

GROUND WATER SAMPLING FORM

1. Date 5-2-18 Sample No. ERM-6
2. Location GE UST-9
3. Well No. ERM-6
4. Well Depth (ft. below TOC) 31.62
5. Screen Length (ft.) 20'
6. Sampling Crew Dave Seaman
7. Weather: Wind 10mph Air Temp. 80° Precip. NONE
8. Water Level Measurement (ft. TOC): 22.75
   [Y or N] Well Labeled _____ Casing Elev. (ft. MSL): 360.62
   Comments _____
9. Depth to Hydrocarbon (if present) — Depth to Hydrocarbon/Water Interface — Thickness —
10. Casing Type PVC Diameter 4" Gal/Ft 0.657
11. Total Depth 31.62 - Depth to Water 22.75 = Ht. 8.87
12. Well Volume 5.94 = Ht. 8.87 x Gal/Ft. 0.657
13. Required Purge Volume 17.83 Actual Purge Volume 18 gal.
14. Purge Method/Sampling Method PUMP
15.

	Time	Gallons	Temperature	Conductivity	pH	
Initial	1235	0	15.32	0.292	5.87	
		6	14.65	0.282	5.83	
		12	14.51	0.280	6.01	
Sample	1315	18	14.50	0.280	6.01	DTW = 23.53

16. Analytical Methods BTEX, MTBE
17. [Y or N] Turbid? N Purge Water Containerized? YES
18. QA/QC Samples? NO
19. Reviewed By Dave Sea Date/Time 5-2-18 1320

	ERM-4	ERM-6	ERM-7	TP-7	TP-8	ERM-18	OBG-17	OBG-18	TP-6	TP-11
Well Depth (ft. TOC)	32.0	32.5	37.6	47.3	44.5	27.0	18	20	47.0	48.0
Screen Length (ft.)	20.0	20.0	20.0	20.0	20.0	15.0	10.0	10.0	20.0	20.0
Casing Elev. (ft. MSL)	359.96	360.62	366.3	360.83*	362.14	351.1	351.96	349.14	359.18	364.51
Casing Dia. (in.)	4	4	4	2	2	4	2	2	2	2
Gallons/Foot	0.65	0.65	0.65	0.16	0.16	0.65	0.16	0.16	0.16	0.16

Notes: (*) TP-7 was re-surveyed due to damaged well stick-up in Fall 2000. The elevation shown is the correct elevation.

GROUND WATER SAMPLING FORM

1. Date 5/2/18 Sample No. TP-7
2. Location GE UST-9
3. Well No. TP-7
4. Well Depth (ft. below TOC) 46.75
5. Screen Length (ft.) 20'
6. Sampling Crew CDraw / O. Staman
7. Weather: Wind Calm Air Temp. 75°F Precip. None
8. Water Level Measurement (ft. TOC): 23.21
   [Y or N] Well Labeled Y Casing Elev. (ft. MSL): 360.8
   Comments
9. Depth to Hydrocarbon (if present) — Depth to Hydrocarbon/Water Interface — Thickness —
10. Casing Type PVC Diameter 2" Gal/Ft 0.163
11. Total Depth 46.75 - Depth to Water 23.21 = Ht. 23.54
12. Well Volume 3.84 = Ht. 23.54 x Gal/Ft. 0.163
13. Required Purge Volume 11.5 Actual Purge Volume 11.5
14. Purge Method/Sampling Method BAILER
15.

	Time	Gallons	Temperature	Conductivity	pH	
Initial	1015	1	13.52	0.075	6.71	
	1025	4	13.36	0.076	4.18	
	1035	7	13.44	0.079	4.16	
	1045	10	13.50	0.083	4.20	
Sample	1055	11.5	13.54	0.086	4.22	OTW- 23.36

16. Analytical Methods BTEX, MTBE
17. [Y or N] Turbid? Yes - cloudy Purge Water Containerized? YES
18. QA/QC Samples? (YES) BLIND DUPE (TP-170), EQUIP RINSATE BLANK (TP-7EB)
19. Reviewed By [signature] 1105 Date/Time 5/2/18 1420 1110

	ERM-4	ERM-6	ERM-7	TP-7	TP-8	ERM-18	OBG-17	OBG-18	TP-6	TP-11
Well Depth (ft. TOC)	32.0	32.5	37.6	47.3	44.5	27.0	18	20	47.0	48.0
Screen Length (ft.)	20.0	20.0	20.0	20.0	20.0	15.0	10.0	10.0	20.0	20.0
Casing Elev. (ft. MSL)	359.96	360.62	366.3	360.83*	362.14	351.1	351.96	349.14	359.18	364.51
Casing Dia. (in.)	4	4	4	2	2	4	2	2	2	2
Gallons/Foot	0.65	0.65	0.65	0.16	0.16	0.65	0.16	0.16	0.16	0.16

Notes: (*) TP-7 was re-surveyed due to damaged well stick-up in Fall 2000. The elevation shown is the correct elevation.

GROUND WATER SAMPLING FORM

1. Date 5/2/18 Sample No. ERM-18
2. Location GE UST-9
3. Well No. ERM-18
4. Well Depth (ft. below TOC) 26.25
5. Screen Length (ft.) 15'
6. Sampling Crew C. Drevo / D. Seaman
7. Weather: Wind Calm Air Temp. 70°F Precip. None
8. Water Level Measurement (ft. TOC): 16.51
   (Y) or N] Well Labeled Y Casing Elev. (ft. MSL): 351.1
   Comments
9. Depth to Hydrocarbon (if present) — Depth to Hydrocarbon/Water Interface — Thickness —
10. Casing Type PVC Diameter 4" Gal/Ft 0.657
11. Total Depth 26.25 - Depth to Water 16.51 = Ht. 9.74
12. Well Volume 1.59 = Ht. 9.74 x Gal/Ft. 0.657
13. Required Purge Volume 19 Actual Purge Volume 20
14. Purge Method/Sampling Method PUMP
15.

	Time	Gallons	Temperature	Conductivity	pH	
Initial	0930	1	12.78	0.270	7.16	
	0935	6	12.62	0.255	5.87	
	0940	11	12.53	0.255	5.62	
	0945	16	12.55	0.256	5.71	
Sample	0950	20	12.54	0.258	5.75	DTW - 16.73

16. Analytical Methods BTEX, MTBE
17. [Y or N] Turbid? N Purge Water Containerized? YES
18. QA/QC Samples? NO
19. Reviewed By [signature] Date/Time 5/2/18 1420

	ERM-4	ERM-6	ERM-7	TP-7	TP-8	ERM-18	OBG-17	OBG-18	TP-6	TP-11
Well Depth (ft. TOC)	32.0	32.5	37.6	47.3	44.5	27.0	18	20	47.0	48.0
Screen Length (ft.)	20.0	20.0	20.0	20.0	20.0	15.0	10.0	10.0	20.0	20.0
Casing Elev. (ft. MSL)	359.96	360.62	366.3	360.83*	362.14	351.1	351.96	349.14	359.18	364.51
Casing Dia. (in.)	4	4	4	2	2	4	2	2	2	2
Gallons/Foot	0.65	0.65	0.65	0.16	0.16	0.65	0.16	0.16	0.16	0.16

Notes: (*) TP-7 was re-surveyed due to damaged well stick-up in Fall 2000. The elevation shown is the correct elevation.

GROUND WATER SAMPLING FORM

1. Date 5/2/18 Sample No. OBG-18
2. Location GE UST-9
3. Well No. OBG-18
4. Well Depth (ft. below TOC) 20
5. Screen Length (ft.) 10'
6. Sampling Crew D. Seaman / C. Dreve
7. Weather: Wind Calm Air Temp. 65° F Precip. None
8. Water Level Measurement (ft. TOC): 12.56
   (Y) or N] Well Labeled Y Casing Elev. (ft. MSL): 349.14
   Comments
9. Depth to Hydrocarbon (if present) — Depth to Hydrocarbon/Water Interface — Thickness —
10. Casing Type PVC Diameter 2" Gal/Ft 0.163
11. Total Depth 20 - Depth to Water 12.56 = Ht. 7.44
12. Well Volume 1.21 = Ht. 7.44 x Gal/Ft. 0.163
13. Required Purge Volume 3.64 Actual Purge Volume 3.75
14. Purge Method/Sampling Method BAILER
15.

	Time	Gallons	Temperature	Conductivity	pH
Initial	0830	1	12.37	0.425	7.54
	0840	2	11.66	0.427	7.20
	0850	3	11.88	0.426	6.69
	0900	3.75	11.51	0.430	6.53
Sample	0910	-	11.55	0.432	6.52

16. Analytical Methods BTEX, MTBE
17. [Y or (N)] Turbid? Purge Water Containerized? YES
18. QA/QC Samples? NO
19. Reviewed By [signature] Date/Time 5/2/18 1420

OTW - 13.90

	ERM-4	ERM-6	ERM-7	TP-7	TP-8	ERM-18	OBG-17	OBG-18	TP-6	TP-11
Well Depth (ft. TOC)	32.0	32.5	37.6	47.3	44.5	27.0	18	20	47.0	48.0
Screen Length (ft.)	20.0	20.0	20.0	20.0	20.0	15.0	10.0	10.0	20.0	20.0
Casing Elev. (ft. MSL)	359.96	360.62	366.3	360.83*	362.14	351.1	351.96	349.14	359.18	364.51
Casing Dia. (in.)	4	4	4	2	2	4	2	2	2	2
Gallons/Foot	0.65	0.65	0.65	0.16	0.16	0.65	0.16	0.16	0.16	0.16

Notes: (*) TP-7 was re-surveyed due to damaged well stick-up in Fall 2000. The elevation shown is the correct elevation.

GROUND WATER SAMPLING FORM

1. Date 5/2/18 Sample No. TP-6
2. Location GE UST-9
3. Well No. TP-6
4. Well Depth (ft. below TOC) 43.80
5. Screen Length (ft.) 20'
6. Sampling Crew C. Drew / D. Seaman
7. Weather: Wind Calm Air Temp. 80° F Precip. None
8. Water Level Measurement (ft. TOC): 22.12
   [Y or N] Well Labeled Y Casing Elev. (ft. MSL): 359.18
   Comments
9. Depth to Hydrocarbon (if present) — Depth to Hydrocarbon/Water Interface — Thickness —
10. Casing Type PVC Diameter 2" Gal/Ft 0.163
11. Total Depth 43.80 - Depth to Water 22.12 = Ht. 21.60
12. Well Volume 3.53 = Ht. 21.60 x Gal/Ft. 0.163
13. Required Purge Volume 10.6 Actual Purge Volume 10.75
14. Purge Method/Sampling Method BAILER
15.

	Time	Gallons	Temperature	Conductivity	pH
Initial	1225	1	14.04	0.235	5.51
	1235	4	14.12	0.502	5.05
	1245	7	14.09	0.509	4.98
Sample	1300	10.75	13.98	0.505	4.95

OTW-2248

16. Analytical Methods BTEX, MTBE
17. [Y or N] Turbid? N Purge Water Containerized? YES
18. QA/QC Samples? NO
19. Reviewed By [signature] Date/Time 5/2/18 1420

	ERM-4	ERM-6	ERM-7	TP-7	TP-8	ERM-18	OBG-17	OBG-18	TP-6	TP-11
Well Depth (ft. TOC)	32.0	32.5	37.6	47.3	44.5	27.0	18	20	47.0	48.0
Screen Length (ft.)	20.0	20.0	20.0	20.0	20.0	15.0	10.0	10.0	20.0	20.0
Casing Elev. (ft. MSL)	359.96	360.62	366.3	360.83*	362.14	351.1	351.96	349.14	359.18	364.51
Casing Dia. (in.)	4	4	4	2	2	4	2	2	2	2
Gallons/Foot	0.65	0.65	0.65	0.16	0.16	0.65	0.16	0.16	0.16	0.16

Notes: (*) TP-7 was re-surveyed due to damaged well stick-up in Fall 2000. The elevation shown is the correct elevation.

GROUND WATER SAMPLING FORM

1. Date 5/2/18 Sample No. OBG-17
2. Location GE UST-9
3. Well No. OBG-17
4. Well Depth (ft. below TOC) 20.86
5. Screen Length (ft.) 10'
6. Sampling Crew C. Nevo / D. Seaman
7. Weather: Wind calm Air Temp. 75°F Precip. None
8. Water Level Measurement (ft. TOC): 17.39
   [Y or N] Well Labeled Y Casing Elev. (ft. MSL): 351.96
   Comments
9. Depth to Hydrocarbon (if present) — Depth to Hydrocarbon/Water Interface — Thickness —
10. Casing Type PVC Diameter 2" Gal/Ft 0.163
11. Total Depth 20.86 - Depth to Water 17.39 = Ht. 3.47
12. Well Volume 0.57 = Ht. 3.47 x Gal/Ft. 0.163
13. Required Purge Volume 1.71 Actual Purge Volume 1.75
14. Purge Method/Sampling Method BAILER
15.

	Time	Gallons	Temperature	Conductivity	pH	
Initial	1130	0.25	12.95	0.634	5.60	
	1140	0.75	12.46	0.640	5.68	
	1150	1.25	12.50	0.638	5.70	
Sample	1200	1.75	12.48	0.640	5.66	DTW - 20.51

16. Analytical Methods BTEX, MTBE
17. [Y or N] Turbid? N Purge Water Containerized? YES
18. QA/QC Samples? NO
19. Reviewed By [signature] Date/Time 5/2/18 1420

	ERM-4	ERM-6	ERM-7	TP-7	TP-8	ERM-18	OBG-17	OBG-18	TP-6	TP-11
Well Depth (ft. TOC)	32.0	32.5	37.6	47.3	44.5	27.0	18	20	47.0	48.0
Screen Length (ft.)	20.0	20.0	20.0	20.0	20.0	15.0	10.0	10.0	20.0	20.0
Casing Elev. (ft. MSL)	359.96	360.62	366.3	360.83*	362.14	351.1	351.96	349.14	359.18	364.51
Casing Dia. (in.)	4	4	4	2	2	4	2	2	2	2
Gallons/Foot	0.65	0.65	0.65	0.16	0.16	0.65	0.16	0.16	0.16	0.16

Notes: (*) TP-7 was re-surveyed due to damaged well stick-up in Fall 2000. The elevation shown is the correct elevation.

5-2-18 GE UST-9

0630 - Dave Seaman & Chuck Drevo
- Sunny 70°
- Task Bi-Annual groundwater Sampling.
- Reviewed HASP
* Calibrate YSI-556 Pine # 035554

PH	4.0 = 4.0	
	7.0 = 7.0	
	10.0 = 10.0	
Conductivity	1.413 = 1.413	ms/cm
Temp°	15.10°C	

* YSI-556 Pine # 16512

PH	4.0 = 4.0	
	7.0 = 7.0	
	10.0 = 10.0	
Conductivity ms/cm	1.413 = 1.413	
Temp =	15.28°C	

- Collected Synoptic water levels

Well ID	DTW	DTB
ERM-18	16.51	26.25
OBG-18	12.56	19.91
OBG-17	17.39	20.83
TP-7	23.21	46.75
TP-11	26.88	47.70
TP-6	22.12	43.80
TP-8	24.12	44.70
ERM-4	22.27	31.84
ERM-7	28.81	36.32
ERM-6	22.75	31.62

* Sampled all wells
* Drumed all purge water
* Labeled Drum S-1 with purge water From ERM-6, ERM-7 & TP-8.
  - Collected sample from drum S-1 @ 1400
* All other purge water went into other drum.
* Labeled both drums and left inside Fenced area.
* Completed COC and packed cooler for Pace to pick up tomorrow.

1445 Departed site

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 2

2226809

Section A Required Client Information:

Company: TetraTech GEO
Address:
Email To: Belssi.Chang@tetratech.com
Phone: 410990-4607 Fax: 410990-4749
Requested Due Date/TAT:

Section B Required Project Information:

Report To: Belssi Chang
Copy To:
Purchase Order No.:
Project Name: GE Columbia UST-9
Project Number:

Section C Invoice Information:

Attention: Belssi Chang
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE: MD

Section D Required Client Information

Matrix Codes (MATRIX / CODE)

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

ITEM #	SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Requested Analysis Filtered (Y/N): BTEX & MTBE 8260	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	OBG-18					5-2 2018	0910		3				X					Y	X		
2	ERM-18						0950		3				X					Y	X		
3	OBG-17						1200		3				X					Y	X		
4	TP-7						1055		3				X					Y	X		
5	TP-170						1105		3				X					Y	X		
6	TP-7EB						1110		3				X					Y	X		
7	TP-6						1300		3				X					Y	X		
8	TP-11						0905		3				X					Y	X		
9	TP-8						1005		3				X					Y	X		
10	ERM-4						1107		3				X					Y	X		
11	ERM-7						1210		3				X					Y	X		
12	ERM-6						1315		3				X					Y	X		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
No data package required Required LOQs: 3 ug/L For xylenes 1 ug/L For all other compounds Report "ND" if result is < LOQ							

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER:
SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY):

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: of 2226808

Section A Required Client Information:

Company: TetraTech GEO
Address:
Email To: Belssi.Chang@tetratech.com
Phone: 410990-4607 Fax: 4109904749
Requested Due Date/TAT:

Section B Required Project Information:

Report To: Belssi Chang
Copy To:
Purchase Order No.:
Project Name: GE Columbia UST-9
Project Number:

Section C Invoice Information:

Attention: Belssi Chang
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: MD

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: BTEX+MTBE 8260	BTEX	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	DRUM S-1					5-2-2018	1400		3				X						X		
2	Trip blank								2				X					X			
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
No data package required							
Required LOQ's: 3 ug/L for Xylenes; 1 ug/L for all other compounds							
Report "ND" if result is < LOQ							

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER:
SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY):

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

GROUND WATER SAMPLING FORM

1. Date 5-2-18 Sample No. TP-11
2. Location GE UST-9
3. Well No. TP-11
4. Well Depth (ft. below TOC) 47.70
5. Screen Length (ft.) 20'
6. Sampling Crew Dave Seaman
7. Weather: Wind calm Air Temp. 67° Precip. N/A
8. Water Level Measurement (ft. TOC): 26.88
   [Y or N] Well Labeled Y Casing Elev. (ft. MSL): 364.51
   Comments
9. Depth to Hydrocarbon (if present) — Depth to Hydrocarbon/Water Interface — Thickness —
10. Casing Type PVC Diameter 2" Gal/Ft 0.163
11. Total Depth 47.70 - Depth to Water 26.88 = Ht. 20.82
12. Well Volume 3.33 = Ht. 20.82 x Gal/Ft. 0.163
13. Required Purge Volume 9.99 Actual Purge Volume 10 gal.
14. Purge Method/Sampling Method BAILER
15.

	Time	Gallons	Temperature	Conductivity	pH	
Initial	0840	0	12.49	0.424	5.95	
		3.5	12.55	0.405	5.39	
		7.0	12.55	0.407	5.38	
			12.81	0.408	5.40	
Sample	0905	10.0	12.83	0.408	5.41	DTW = 26.92

16. Analytical Methods BTEX, MTBE
17. [Y or N] Turbid? Y Purge Water Containerized? YES
18. QA/QC Samples? NO
19. Reviewed By Dave Sea Date/Time 5-2-18 0910

	ERM-4	ERM-6	ERM-7	TP-7	TP-8	ERM-18	OBG-17	OBG-18	TP-6	TP-11
Well Depth (ft. TOC)	32.0	32.5	37.6	47.3	44.5	27.0	18	20	47.0	48.0
Screen Length (ft.)	20.0	20.0	20.0	20.0	20.0	15.0	10.0	10.0	20.0	20.0
Casing Elev. (ft. MSL)	359.96	360.62	366.3	360.83*	362.14	351.1	351.96	349.14	359.18	364.51
Casing Dia. (in.)	4	4	4	2	2	4	2	2	2	2
Gallons/Foot	0.65	0.65	0.65	0.16	0.16	0.65	0.16	0.16	0.16	0.16

Notes: (*) TP-7 was re-surveyed due to damaged well stick-up in Fall 2000. The elevation shown is the correct elevation.

GROUND WATER SAMPLING FORM

1. Date 5-2-18 Sample No. TP-8
2. Location GE UST-9
3. Well No. TP-8
4. Well Depth (ft. below TOC) 44.70
5. Screen Length (ft.) 20'
6. Sampling Crew Dave Segman
7. Weather: Wind Calm Air Temp. 75° Precip. NONE
8. Water Level Measurement (ft. TOC): 24.12
   [Y or N] Well Labeled Y Casing Elev. (ft. MSL): 362.14
   Comments
9. Depth to Hydrocarbon (if present) — Depth to Hydrocarbon/Water Interface — Thickness —
10. Casing Type PVC Diameter 2" Gal/Ft 0.163
11. Total Depth 44.70' - Depth to Water 24.12 = Ht. 20.58
12. Well Volume 3.29 = Ht. 20.58 x Gal/Ft. 0.163
13. Required Purge Volume 9.87 Actual Purge Volume 10
14. Purge Method/Sampling Method BAILER
15.

	Time	Gallons	Temperature	Conductivity	pH
Initial	0930	0	15.13	0.247	5.62
		3.5	14.44	0.307	5.51
		7.0	14.39	0.329	5.65
Sample	1005	10.0	14.36	0.329	5.68

DTW = 24.14

16. Analytical Methods BTEX, MTBE
17. [Y or N] Turbid? Y Purge Water Containerized? YES
18. QA/QC Samples? NO
19. Reviewed By Dave Sia Date/Time 5-2-18 1010

	ERM-4	ERM-6	ERM-7	TP-7	TP-8	ERM-18	OBG-17	OBG-18	TP-6	TP-11
Well Depth (ft. TOC)	32.0	32.5	37.6	47.3	44.5	27.0	18	20	47.0	48.0
Screen Length (ft.)	20.0	20.0	20.0	20.0	20.0	15.0	10.0	10.0	20.0	20.0
Casing Elev. (ft. MSL)	359.96	360.62	366.3	360.83*	362.14	351.1	351.96	349.14	359.18	364.51
Casing Dia. (in.)	4	4	4	2	2	4	2	2	2	2
Gallons/Foot	0.65	0.65	0.65	0.16	0.16	0.65	0.16	0.16	0.16	0.16

Notes: (*) TP-7 was re-surveyed due to damaged well stick-up in Fall 2000. The elevation shown is the correct elevation.

GROUND WATER SAMPLING FORM

1. Date 5-2-18 Sample No. ERM-4
2. Location GE UST-9
3. Well No. ERM-4
4. Well Depth (ft. below TOC) 31.84
5. Screen Length (ft.) 20'
6. Sampling Crew Dave Seaman
7. Weather: Wind Calm Air Temp. 75° Precip. NONE
8. Water Level Measurement (ft. TOC): 22.27
   [Y or N] Well Labeled Y Casing Elev. (ft. MSL): 359.96
   Comments
9. Depth to Hydrocarbon (if present) — Depth to Hydrocarbon/Water Interface — Thickness —
10. Casing Type PVC Diameter 4" Gal/Ft 0.657
11. Total Depth 31.84 - Depth to Water 22.27 = Ht. 9.57
12. Well Volume 6.41 = Ht. 9.57 x Gal/Ft. 0.657
13. Required Purge Volume 19.24 Actual Purge Volume 20 gal.
14. Purge Method/Sampling Method PUMP
15.

	Time	Gallons	Temperature	Conductivity	pH	
Initial	1025	0	14.73	0.281	6.25	
		6.5	12.83	0.268	5.83	
		13.0	12.86	0.268	5.65	
Sample	1107	20.0	12.87	0.268	5.65	DTW=22.65

16. Analytical Methods BTEX, MTBE
17. [Y or N] Turbid? Y Purge Water Containerized? YES
18. QA/QC Samples? NO
19. Reviewed By Dave Sea Date/Time 5/2/18 1115

	ERM-4	ERM-6	ERM-7	TP-7	TP-8	ERM-18	OBG-17	OBG-18	TP-6	TP-11
Well Depth (ft. TOC)	32.0	32.5	37.6	47.3	44.5	27.0	18	20	47.0	48.0
Screen Length (ft.)	20.0	20.0	20.0	20.0	20.0	15.0	10.0	10.0	20.0	20.0
Casing Elev. (ft. MSL)	359.96	360.62	366.3	360.83*	362.14	351.1	351.96	349.14	359.18	364.51
Casing Dia. (in.)	4	4	4	2	2	4	2	2	2	2
Gallons/Foot	0.65	0.65	0.65	0.16	0.16	0.65	0.16	0.16	0.16	0.16

Notes: (*) TP-7 was re-surveyed due to damaged well stick-up in Fall 2000. The elevation shown is the correct elevation.

GROUND WATER SAMPLING FORM

1. Date 5-2-18 Sample No. ERM-7
2. Location GE UST-9
3. Well No. ERM-7
4. Well Depth (ft. below TOC) 36.32
5. Screen Length (ft.) 20'
6. Sampling Crew Dave Seaman
7. Weather: Wind 5mph Air Temp. 75° Precip. NONE
8. Water Level Measurement (ft. TOC): 28.81
   [Y or N] Well Labeled Y Casing Elev. (ft. MSL): 366.3
   Comments
9. Depth to Hydrocarbon (if present) Depth to Hydrocarbon/Water Interface Thickness
10. Casing Type PVC Diameter 4" Gal/Ft 0.657
11. Total Depth 36.32 - Depth to Water 28.81 = Ht. 7.51
12. Well Volume 5.03 = Ht. 7.51 x Gal/Ft. 0.657
13. Required Purge Volume 15.09 Actual Purge Volume 15.5 gal.
14. Purge Method/Sampling Method PUMP
15.

	Time	Gallons	Temperature	Conductivity	pH	
Initial	1125	0	15.38	0.250	5.83	
		5	14.54	0.212	5.39	
		10	14.55	0.209	5.35	
Sample	1210	15.5	14.57	0.209	5.34	DTW = 29.22

16. Analytical Methods BTEX, MTBE
17. [Y or N] Turbid? N Purge Water Containerized? YES
18. QA/QC Samples? NO
19. Reviewed By Dave Sea Date/Time 5-2-18 1215

	ERM-4	ERM-6	ERM-7	TP-7	TP-8	ERM-18	OBG-17	OBG-18	TP-6	TP-11
Well Depth (ft. TOC)	32.0	32.5	37.6	47.3	44.5	27.0	18	20	47.0	48.0
Screen Length (ft.)	20.0	20.0	20.0	20.0	20.0	15.0	10.0	10.0	20.0	20.0
Casing Elev. (ft. MSL)	359.96	360.62	366.3	360.83*	362.14	351.1	351.96	349.14	359.18	364.51
Casing Dia. (in.)	4	4	4	2	2	4	2	2	2	2
Gallons/Foot	0.65	0.65	0.65	0.16	0.16	0.65	0.16	0.16	0.16	0.16

Notes: (*) TP-7 was re-surveyed due to damaged well stick-up in Fall 2000. The elevation shown is the correct elevation.

GROUND WATER SAMPLING FORM

1. Date 5-2-18 Sample No. ERM-6
2. Location GE UST-9
3. Well No. ERM-6
4. Well Depth (ft. below TOC) 31.62
5. Screen Length (ft.) 20'
6. Sampling Crew Dave Seaman
7. Weather: Wind 10mph Air Temp. 80° Precip. NONE
8. Water Level Measurement (ft. TOC): 22.75
   [Y or N] Well Labeled _____ Casing Elev. (ft. MSL): 360.62
   Comments _____
9. Depth to Hydrocarbon (if present) — Depth to Hydrocarbon/Water Interface — Thickness —
10. Casing Type PVC Diameter 4" Gal/Ft 0.657
11. Total Depth 31.62 - Depth to Water 22.75 = Ht. 8.87
12. Well Volume 5.94 = Ht. 8.87 x Gal/Ft. 0.657
13. Required Purge Volume 17.83 Actual Purge Volume 18 gal.
14. Purge Method/Sampling Method PUMP
15.

	Time	Gallons	Temperature	Conductivity	pH	
Initial	1235	0	15.32	0.292	5.87	
		6	14.65	0.282	5.83	
		12	14.51	0.280	6.01	
Sample	1315	18	14.50	0.280	6.01	DTW = 23.53

16. Analytical Methods BTEX, MTBE
17. [Y or N] Turbid? N Purge Water Containerized? YES
18. QA/QC Samples? NO
19. Reviewed By Dave Sea Date/Time 5-2-18 1320

	ERM-4	ERM-6	ERM-7	TP-7	TP-8	ERM-18	OBG-17	OBG-18	TP-6	TP-11
Well Depth (ft. TOC)	32.0	32.5	37.6	47.3	44.5	27.0	18	20	47.0	48.0
Screen Length (ft.)	20.0	20.0	20.0	20.0	20.0	15.0	10.0	10.0	20.0	20.0
Casing Elev. (ft. MSL)	359.96	360.62	366.3	360.83*	362.14	351.1	351.96	349.14	359.18	364.51
Casing Dia. (in.)	4	4	4	2	2	4	2	2	2	2
Gallons/Foot	0.65	0.65	0.65	0.16	0.16	0.65	0.16	0.16	0.16	0.16

Notes: (*) TP-7 was re-surveyed due to damaged well stick-up in Fall 2000. The elevation shown is the correct elevation.

GROUND WATER SAMPLING FORM

1. Date 5/2/18 Sample No. TP-7
2. Location GE UST-9
3. Well No. TP-7
4. Well Depth (ft. below TOC) 46.75
5. Screen Length (ft.) 20'
6. Sampling Crew CDraw / O. Staman
7. Weather: Wind Calm Air Temp. 75°F Precip. None
8. Water Level Measurement (ft. TOC): 23.21
   [Y or N] Well Labeled Y Casing Elev. (ft. MSL): 360.8
   Comments
9. Depth to Hydrocarbon (if present) — Depth to Hydrocarbon/Water Interface — Thickness —
10. Casing Type PVC Diameter 2" Gal/Ft 0.163
11. Total Depth 46.75 - Depth to Water 23.21 = Ht. 23.54
12. Well Volume 3.84 = Ht. 23.54 x Gal/Ft. 0.163
13. Required Purge Volume 11.5 Actual Purge Volume 11.5
14. Purge Method/Sampling Method BAILER
15.

	Time	Gallons	Temperature	Conductivity	pH	
Initial	1015	1	13.52	0.075	6.71	
	1025	4	13.36	0.076	4.18	
	1035	7	13.44	0.079	4.16	
	1045	10	13.50	0.083	4.20	
Sample	1055	11.5	13.54	0.086	4.22	OTW- 23.36

16. Analytical Methods BTEX, MTBE
17. [Y or N] Turbid? Yes - cloudy Purge Water Containerized? YES
18. QA/QC Samples? (YES) BLIND DUPE (TP-170), EQUIP RINSATE BLANK (TP-7EB)
19. Reviewed By [signature] 1105 Date/Time 5/2/18 1420 1110

	ERM-4	ERM-6	ERM-7	TP-7	TP-8	ERM-18	OBG-17	OBG-18	TP-6	TP-11
Well Depth (ft. TOC)	32.0	32.5	37.6	47.3	44.5	27.0	18	20	47.0	48.0
Screen Length (ft.)	20.0	20.0	20.0	20.0	20.0	15.0	10.0	10.0	20.0	20.0
Casing Elev. (ft. MSL)	359.96	360.62	366.3	360.83*	362.14	351.1	351.96	349.14	359.18	364.51
Casing Dia. (in.)	4	4	4	2	2	4	2	2	2	2
Gallons/Foot	0.65	0.65	0.65	0.16	0.16	0.65	0.16	0.16	0.16	0.16

Notes: (*) TP-7 was re-surveyed due to damaged well stick-up in Fall 2000. The elevation shown is the correct elevation.

GROUND WATER SAMPLING FORM

1. Date 5/2/18 Sample No. ERM-18
2. Location GE UST-9
3. Well No. ERM-18
4. Well Depth (ft. below TOC) 26.25
5. Screen Length (ft.) 15'
6. Sampling Crew C. Drevo / D. Seaman
7. Weather: Wind Calm Air Temp. 70°F Precip. None
8. Water Level Measurement (ft. TOC): 16.51
   (Y) or N] Well Labeled Y Casing Elev. (ft. MSL): 351.1
   Comments
9. Depth to Hydrocarbon (if present) — Depth to Hydrocarbon/Water Interface — Thickness —
10. Casing Type PVC Diameter 4" Gal/Ft 0.657
11. Total Depth 26.25 - Depth to Water 16.51 = Ht. 9.74
12. Well Volume 1.59 = Ht. 9.74 x Gal/Ft. 0.657
13. Required Purge Volume 19 Actual Purge Volume 20
14. Purge Method/Sampling Method PUMP
15.

	Time	Gallons	Temperature	Conductivity	pH	
Initial	0930	1	12.78	0.270	7.16	
	0935	6	12.62	0.255	5.87	
	0940	11	12.53	0.255	5.62	
	0945	16	12.55	0.256	5.71	
Sample	0950	20	12.54	0.258	5.75	DTW - 16.73

16. Analytical Methods BTEX, MTBE
17. [Y or N] Turbid? N Purge Water Containerized? YES
18. QA/QC Samples? NO
19. Reviewed By [signature] Date/Time 5/2/18 1420

	ERM-4	ERM-6	ERM-7	TP-7	TP-8	ERM-18	OBG-17	OBG-18	TP-6	TP-11
Well Depth (ft. TOC)	32.0	32.5	37.6	47.3	44.5	27.0	18	20	47.0	48.0
Screen Length (ft.)	20.0	20.0	20.0	20.0	20.0	15.0	10.0	10.0	20.0	20.0
Casing Elev. (ft. MSL)	359.96	360.62	366.3	360.83*	362.14	351.1	351.96	349.14	359.18	364.51
Casing Dia. (in.)	4	4	4	2	2	4	2	2	2	2
Gallons/Foot	0.65	0.65	0.65	0.16	0.16	0.65	0.16	0.16	0.16	0.16

Notes: (*) TP-7 was re-surveyed due to damaged well stick-up in Fall 2000. The elevation shown is the correct elevation.

GROUND WATER SAMPLING FORM

1. Date 5/2/18 Sample No. OBG-18
2. Location GE UST-9
3. Well No. OBG-18
4. Well Depth (ft. below TOC) 20
5. Screen Length (ft.) 10'
6. Sampling Crew D. Seaman / C. Dreve
7. Weather: Wind Calm Air Temp. 65° F Precip. None
8. Water Level Measurement (ft. TOC): 12.56
   (Y) or N] Well Labeled Y Casing Elev. (ft. MSL): 349.14
   Comments
9. Depth to Hydrocarbon (if present) — Depth to Hydrocarbon/Water Interface — Thickness —
10. Casing Type PVC Diameter 2" Gal/Ft 0.163
11. Total Depth 20 - Depth to Water 12.56 = Ht. 7.44
12. Well Volume 1.21 = Ht. 7.44 x Gal/Ft. 0.163
13. Required Purge Volume 3.64 Actual Purge Volume 3.75
14. Purge Method/Sampling Method BAILER
15.

	Time	Gallons	Temperature	Conductivity	pH
Initial	0830	1	12.37	0.425	7.54
	0840	2	11.66	0.427	7.20
	0850	3	11.88	0.426	6.69
	0900	3.75	11.51	0.430	6.53
Sample	0910	-	11.55	0.432	6.52

16. Analytical Methods BTEX, MTBE
17. [Y or (N)] Turbid? Purge Water Containerized? YES
18. QA/QC Samples? NO
19. Reviewed By [signature] Date/Time 5/2/18 1420

OTW - 13.90

	ERM-4	ERM-6	ERM-7	TP-7	TP-8	ERM-18	OBG-17	OBG-18	TP-6	TP-11
Well Depth (ft. TOC)	32.0	32.5	37.6	47.3	44.5	27.0	18	20	47.0	48.0
Screen Length (ft.)	20.0	20.0	20.0	20.0	20.0	15.0	10.0	10.0	20.0	20.0
Casing Elev. (ft. MSL)	359.96	360.62	366.3	360.83*	362.14	351.1	351.96	349.14	359.18	364.51
Casing Dia. (in.)	4	4	4	2	2	4	2	2	2	2
Gallons/Foot	0.65	0.65	0.65	0.16	0.16	0.65	0.16	0.16	0.16	0.16

Notes: (*) TP-7 was re-surveyed due to damaged well stick-up in Fall 2000. The elevation shown is the correct elevation.

GROUND WATER SAMPLING FORM

1. Date 5/2/18 Sample No. TP-6
2. Location GE UST-9
3. Well No. TP-6
4. Well Depth (ft. below TOC) 43.80
5. Screen Length (ft.) 20'
6. Sampling Crew C. Drew / D. Seaman
7. Weather: Wind Calm Air Temp. 80° F Precip. None
8. Water Level Measurement (ft. TOC): 22.12
   [Y or N] Well Labeled Y Casing Elev. (ft. MSL): 359.18
   Comments
9. Depth to Hydrocarbon (if present) — Depth to Hydrocarbon/Water Interface — Thickness —
10. Casing Type PVC Diameter 2" Gal/Ft 0.163
11. Total Depth 43.80 - Depth to Water 22.12 = Ht. 21.60
12. Well Volume 3.53 = Ht. 21.60 x Gal/Ft. 0.163
13. Required Purge Volume 10.6 Actual Purge Volume 10.75
14. Purge Method/Sampling Method BAILER
15.

	Time	Gallons	Temperature	Conductivity	pH
Initial	1225	1	14.04	0.235	5.51
	1235	4	14.12	0.502	5.05
	1245	7	14.09	0.509	4.98
Sample	1300	10.75	13.98	0.505	4.95

OTW-2248

16. Analytical Methods BTEX, MTBE
17. [Y or N] Turbid? N Purge Water Containerized? YES
18. QA/QC Samples? NO
19. Reviewed By [signature] Date/Time 5/2/18 1420

	ERM-4	ERM-6	ERM-7	TP-7	TP-8	ERM-18	OBG-17	OBG-18	TP-6	TP-11
Well Depth (ft. TOC)	32.0	32.5	37.6	47.3	44.5	27.0	18	20	47.0	48.0
Screen Length (ft.)	20.0	20.0	20.0	20.0	20.0	15.0	10.0	10.0	20.0	20.0
Casing Elev. (ft. MSL)	359.96	360.62	366.3	360.83*	362.14	351.1	351.96	349.14	359.18	364.51
Casing Dia. (in.)	4	4	4	2	2	4	2	2	2	2
Gallons/Foot	0.65	0.65	0.65	0.16	0.16	0.65	0.16	0.16	0.16	0.16

Notes: (*) TP-7 was re-surveyed due to damaged well stick-up in Fall 2000. The elevation shown is the correct elevation.

GROUND WATER SAMPLING FORM

1. Date 5/2/18 Sample No. OBG-17
2. Location GE UST-9
3. Well No. OBG-17
4. Well Depth (ft. below TOC) 20.86
5. Screen Length (ft.) 10'
6. Sampling Crew C. Nevo / D. Seaman
7. Weather: Wind calm Air Temp. 75°F Precip. None
8. Water Level Measurement (ft. TOC): 17.39
   [Y or N] Well Labeled Y Casing Elev. (ft. MSL): 351.96
   Comments
9. Depth to Hydrocarbon (if present) — Depth to Hydrocarbon/Water Interface — Thickness —
10. Casing Type PVC Diameter 2" Gal/Ft 0.163
11. Total Depth 20.86 - Depth to Water 17.39 = Ht. 3.47
12. Well Volume 0.57 = Ht. 3.47 x Gal/Ft. 0.163
13. Required Purge Volume 1.71 Actual Purge Volume 1.75
14. Purge Method/Sampling Method BAILER
15.

	Time	Gallons	Temperature	Conductivity	pH	
Initial	1130	0.25	12.95	0.634	5.60	
	1140	0.75	12.46	0.640	5.68	
	1150	1.25	12.50	0.638	5.70	
Sample	1200	1.75	12.48	0.640	5.66	DTW - 20.51

16. Analytical Methods BTEX, MTBE
17. [Y or N] Turbid? N Purge Water Containerized? YES
18. QA/QC Samples? NO
19. Reviewed By [signature] Date/Time 5/2/18 1420

	ERM-4	ERM-6	ERM-7	TP-7	TP-8	ERM-18	OBG-17	OBG-18	TP-6	TP-11
Well Depth (ft. TOC)	32.0	32.5	37.6	47.3	44.5	27.0	18	20	47.0	48.0
Screen Length (ft.)	20.0	20.0	20.0	20.0	20.0	15.0	10.0	10.0	20.0	20.0
Casing Elev. (ft. MSL)	359.96	360.62	366.3	360.83*	362.14	351.1	351.96	349.14	359.18	364.51
Casing Dia. (in.)	4	4	4	2	2	4	2	2	2	2
Gallons/Foot	0.65	0.65	0.65	0.16	0.16	0.65	0.16	0.16	0.16	0.16

Notes: (*) TP-7 was re-surveyed due to damaged well stick-up in Fall 2000. The elevation shown is the correct elevation.

ATTACHMENT 2

To Semi-Annual Project Progress Report
RCRA Corrective Action Permit
No. MDD046279311

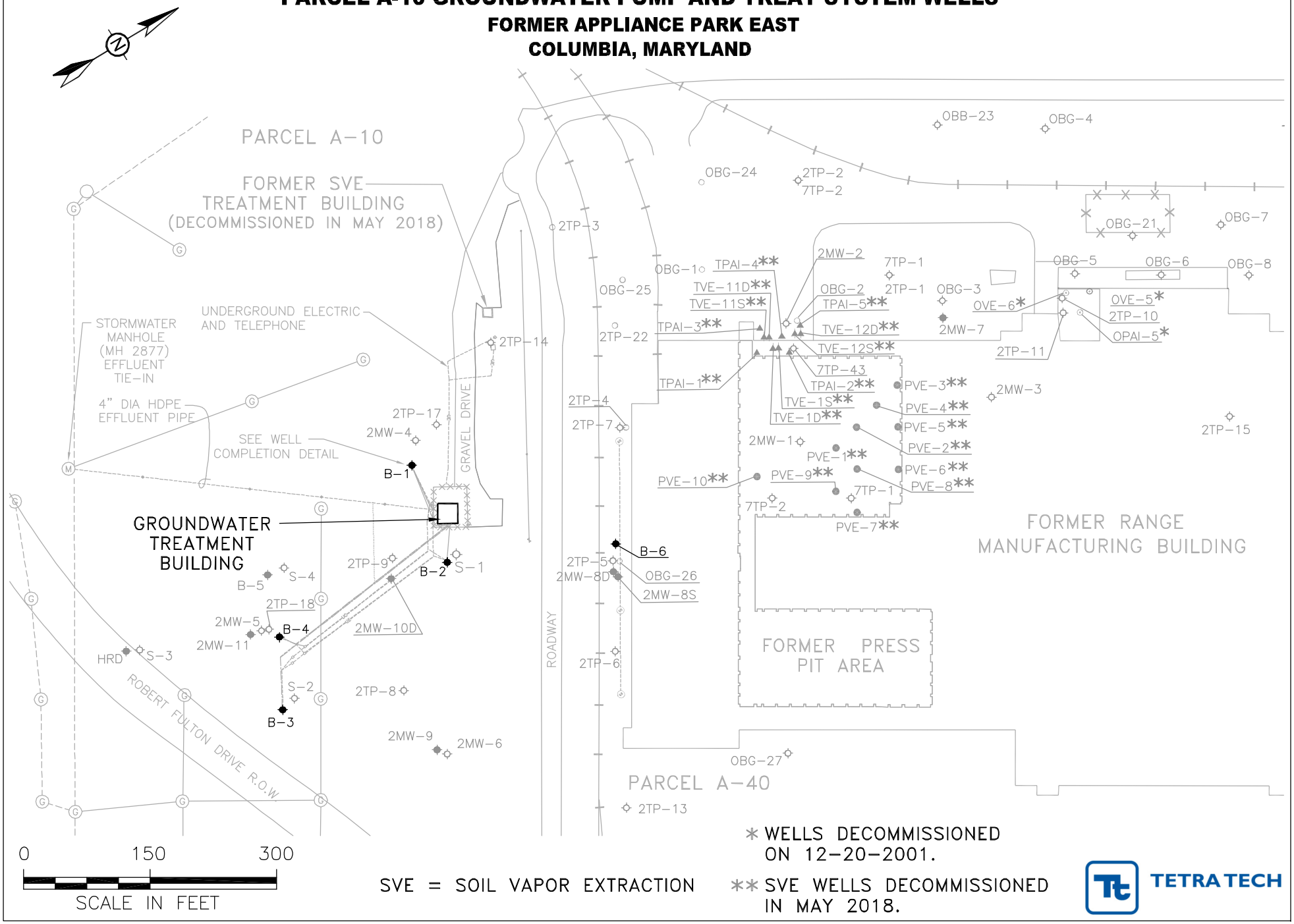
General Electric Co.
Former Appliance Park East Facility
Columbia, MD

Period January 1, 2018 to June 30, 2018

Findings Summary for Groundwater for RFI Units 2 and 7

2204275060A.DWG

FIGURE 1
PARCEL A-10 GROUNDWATER PUMP AND TREAT SYSTEM WELLS
FORMER APPLIANCE PARK EAST
COLUMBIA, MARYLAND



SVE = SOIL VAPOR EXTRACTION

* WELLS DECOMMISSIONED ON 12-20-2001.

** SVE WELLS DECOMMISSIONED IN MAY 2018.

TETRA TECH

Figure 2
Groundwater Pump-and-Treat System Recovery
Former Appliance Park East Facility, Columbia, Maryland

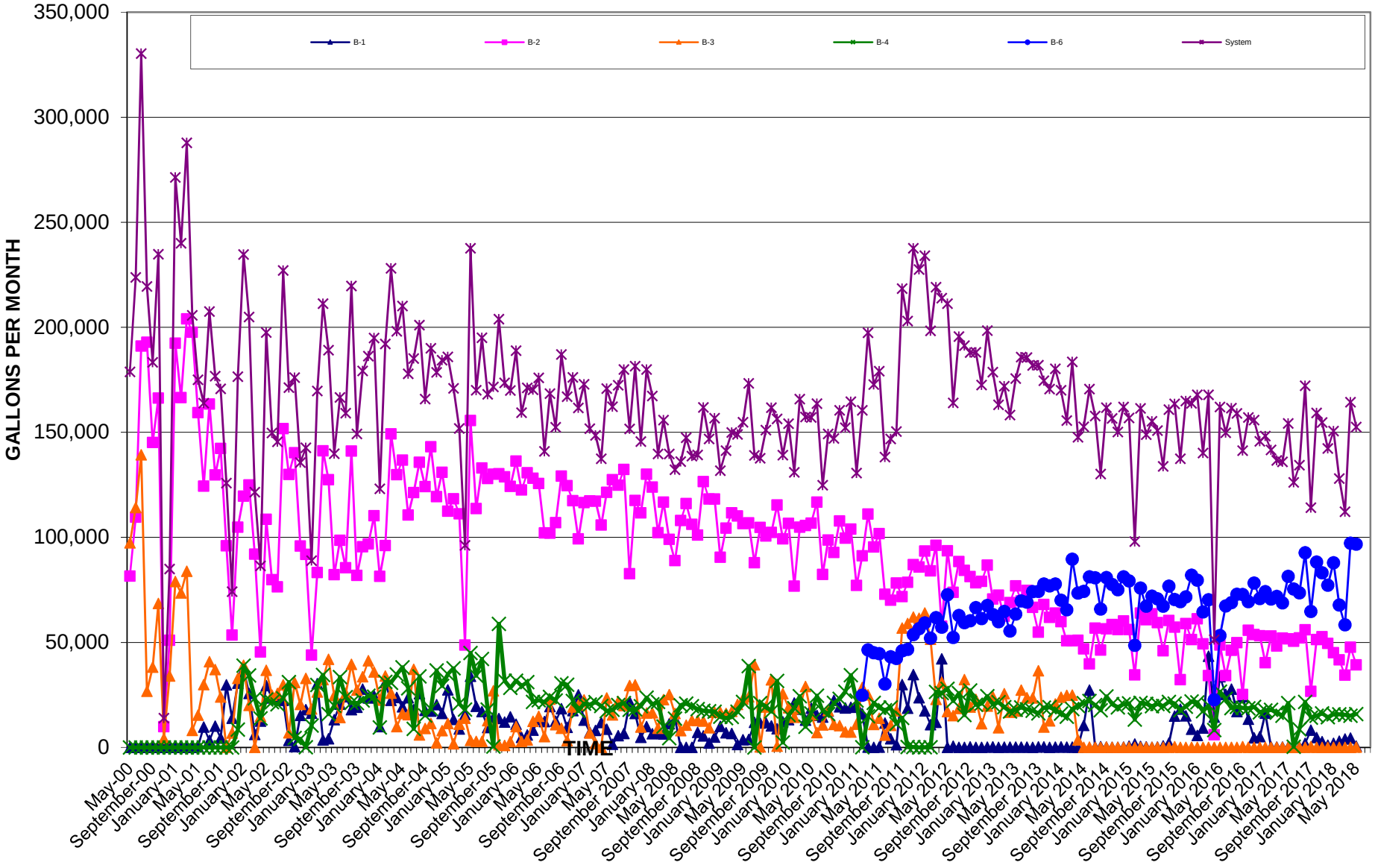


Figure 3
Groundwater Pump-and-Treat System Recovery - Trailing 12-Month Total Gallons
Former Appliance Park East Facility, Columbia, Maryland

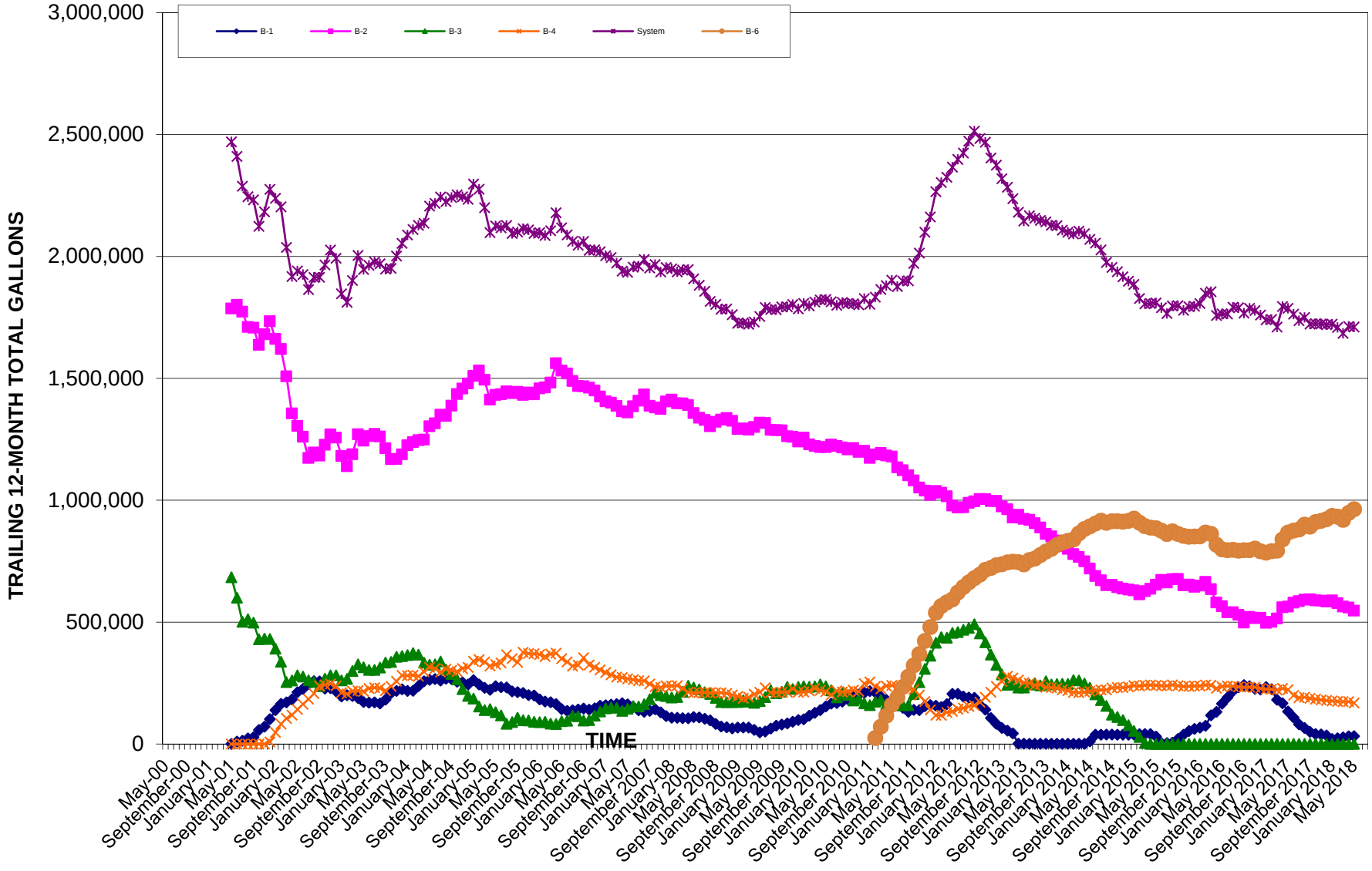
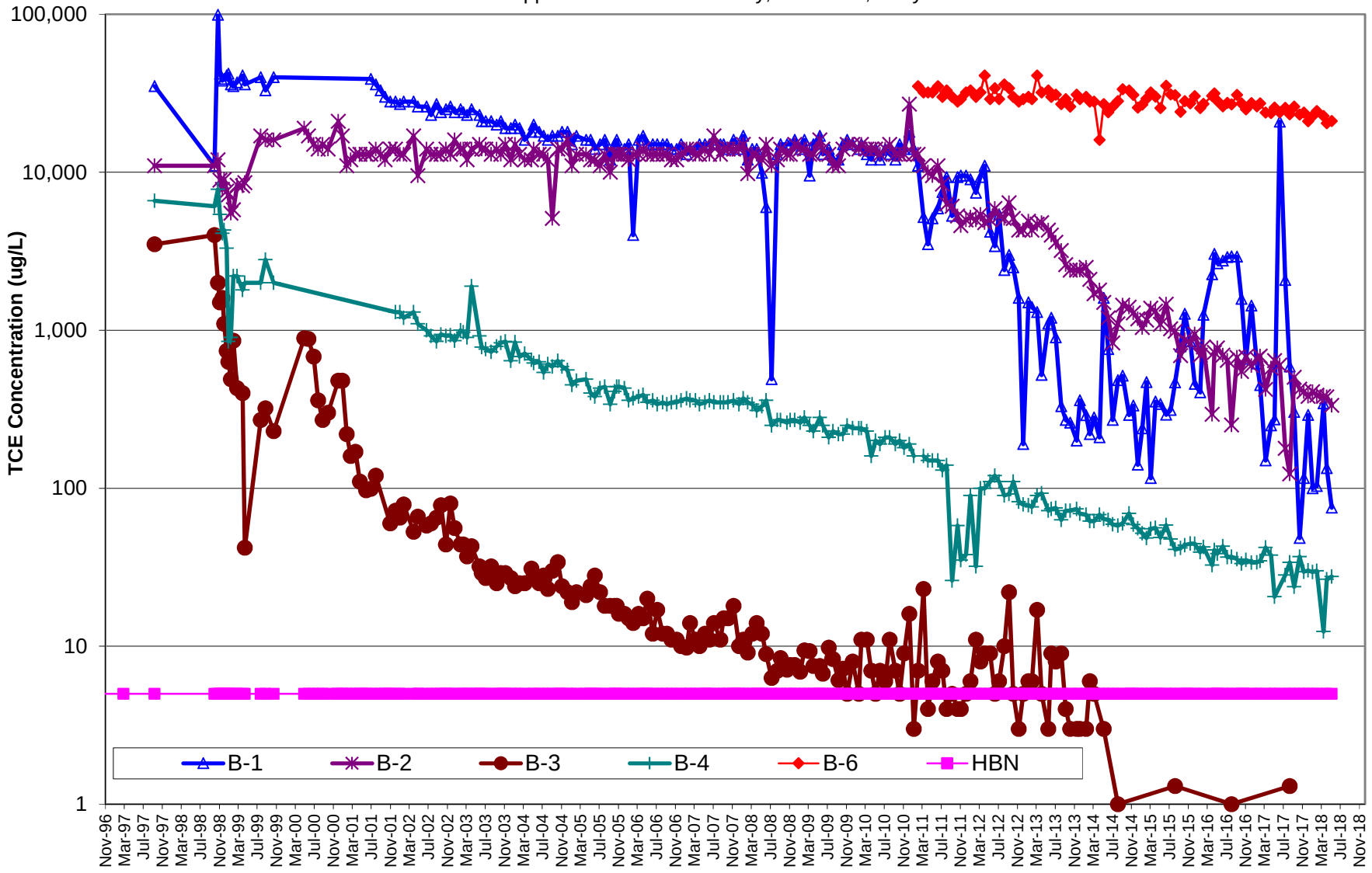


Figure 4
TCE Concentrations in Groundwater Recovery Wells
Former Appliance Park East Facility, Columbia, Maryland



HBN: Permit-Specified Health Based Number

FIGURE 5
GROUNDWATER MONITORING WELLS
PARCELS A-10 AND A-40
FORMER APPLIANCE PARK EAST
COLUMBIA, MARYLAND

Parcel A-43

Parcel A-10

Parcel A-40

Asphalt Road

2TP-16 S.D. 2MH-2 S.D. 2MH-3 2MH-19 Fire 2MH-10 OBG-23 OBG-4 2MH-12 2MH-14 SD1

OBG-24 2TP-2 2MH-20 OBG-9 OBG-54 OBG-55

2TP-3 2MH-4 OBG-1 OBG-7 2MH-13

OBG-25 2MW-13 2MW-12 2TP-1 ODSR AREA

FORMER SVE TREATMENT BUILDING 2MH-5 ETT AREA TPAI-4* TPAI-3* TVE-11S* TPAI-5* TVE-12D* TVE-12S* OVE-6 OVE-5 2TP-10 2TP-11 OPAI-5

2TP-22 2TP-14 7TP-43 TPAI-1* TVE-11D* TVE-1D* TPAI-2* TVE-1S* ODSR

2TP-7 2MH-17 2TP-4 PRESS PIT AREA (WEST WING)

PARCEL A-10 PUMP AND TREAT REMEDIATION COMPOUND 2TP-17 2MW-4 B-1 7TP-2 7TP-1 RANGE BUILDING

2MH-6 2TP-5 OBG-26 2MW-8D 2MW-8S

2TP-9 S-1 S-4 B-5 B-2 2MW-10D

2MW-5 2TP-18 B-4 2MW-11 HRD-1 S-3 2TP-6 PRESS PIT AREA (EAST WING)

S-2 B-3 2TP-8 2MH-7 NEW ADDITION

2MW-9 2MW-6 2MH-18

2TP-13

ROBERT FULTON DRIVE

S.D Fire

LEGEND

EXISTING FEATURES

- SAPROLITE MONITORING WELL LOCATION
- BEDROCK MONITORING WELL LOCATION
- UTILITY BACKFILL MONITORING WELL LOCATION
- COASTAL PLAIN/PERCHED MONITORING WELL LOCATION
- STORM DRAIN MANHOLE
- ODSR FORMER OIL DRUM STORAGE ROOM
- UTILITY LINES - FIRE AND STORM DRAIN
- UTILITY LINES - ABANDONED
- ETT FORMER EXTERIOR TCE TANK AREA
- TVE, OVE - VAPOR EXTRACTION WELLS
- TPAI, OPAI - AIR INLET WELLS
- MONITORING WELLS TO BE SAMPLED ANNUALLY AND WATER LEVELS MONITORED SEMI-ANNUALLY
- MONITORING WELLS TO BE SAMPLED SEMI-ANNUALLY AND WATER LEVELS MONITORED SEMI-ANNUALLY
- MONITORING WELLS TO BE SAMPLED BIENNALLY AND WATER LEVELS MONITORED SEMI-ANNUALLY
- 2TP-17 IS MONITORED ONLY FOR WATER LEVELS SEMI-ANNUALLY

*VAPOR EXTRACTION WELL DECOMMISSIONED IN MAY 2018

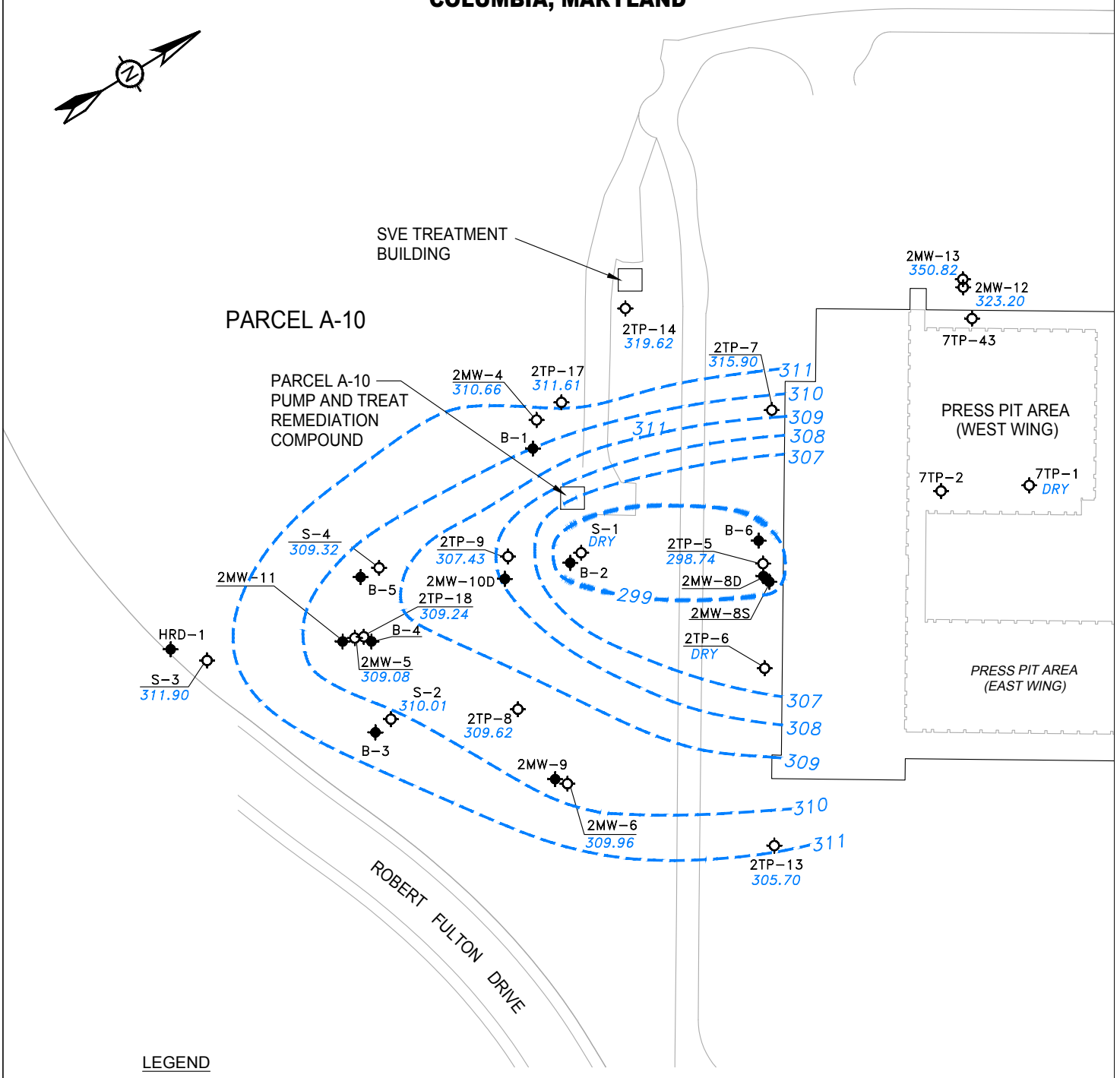
0 150 300

SCALE IN FEET

TETRA TECH

220427506 1A.DWG

FIGURE 6
HYDRAULIC HEADS FOR PARCEL A-10 SAPROLITE WELLS
04 MAY 2018
FORMER APPLIANCE PARK EAST
COLUMBIA, MARYLAND



LEGEND

- SAPROLITE MONITORING WELL LOCATION
- BEDROCK MONITORING WELL LOCATION
- 305.70 GROUNDWATER ELEVATION (FEET)
- 309 GROUNDWATER ELEVATION CONTOUR (FEET) (DASHED WHERE INFERRED)

NOTES:

1. 2MW-13 IS A COASTAL PLAIN/PERCHED GROUNDWATER MONITORING WELL.
2. GROUNDWATER ELEVATIONS FOR 2MW-5 AND 2TP-13 WERE NOT USED TO DEVELOP GROUNDWATER ELEVATION CONTOURS.

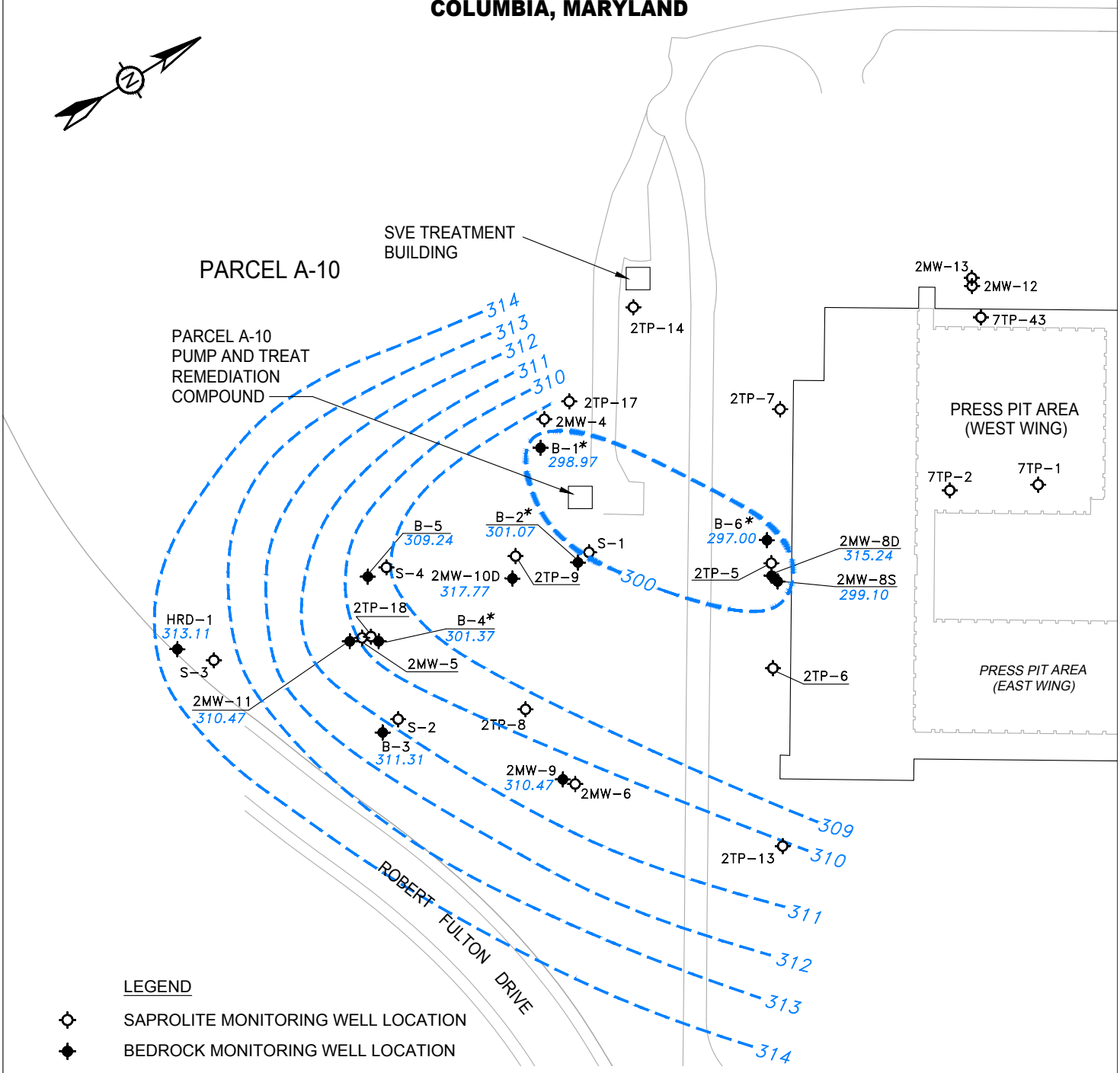
0 150 300

SCALE IN FEET

TETRA TECH

2204275056A.DWG

FIGURE 7
HYDRAULIC HEADS FOR PARCEL A-10 BEDROCK WELLS
04 MAY 2018
FORMER APPLIANCE PARK EAST
COLUMBIA, MARYLAND



LEGEND

- SAPROLITE MONITORING WELL LOCATION
- BEDROCK MONITORING WELL LOCATION
- 311.31 — GROUNDWATER ELEVATION (FEET)
- 309 — GROUNDWATER ELEVATION CONTOUR (FEET) (DASHED WHERE INFERRED)
- * — HYDRAULIC HEAD IS THE LOWER SET POINT FOR THE EXTRACTION WELLS
- NA — GROUNDWATER ELEVATION NOT AVAILABLE; SEE NOTE 3

NOTES:

1. 2MW-13 IS A COASTAL PLAIN/PERCHED GROUNDWATER MONITORING WELL.
2. GROUNDWATER ELEVATIONS FOR 2MW-8D AND 2MW-10D WERE NOT USED TO DEVELOP GROUNDWATER ELEVATION CONTOURS.
3. B-3 WAS TURNED OFF DURING THE WATER LEVEL GAUGING EVENT, AND A WATER LEVEL WAS NOT COLLECTED; THEREFORE A GROUNDWATER ELEVATION FOR B-3 IS NOT AVAILABLE.

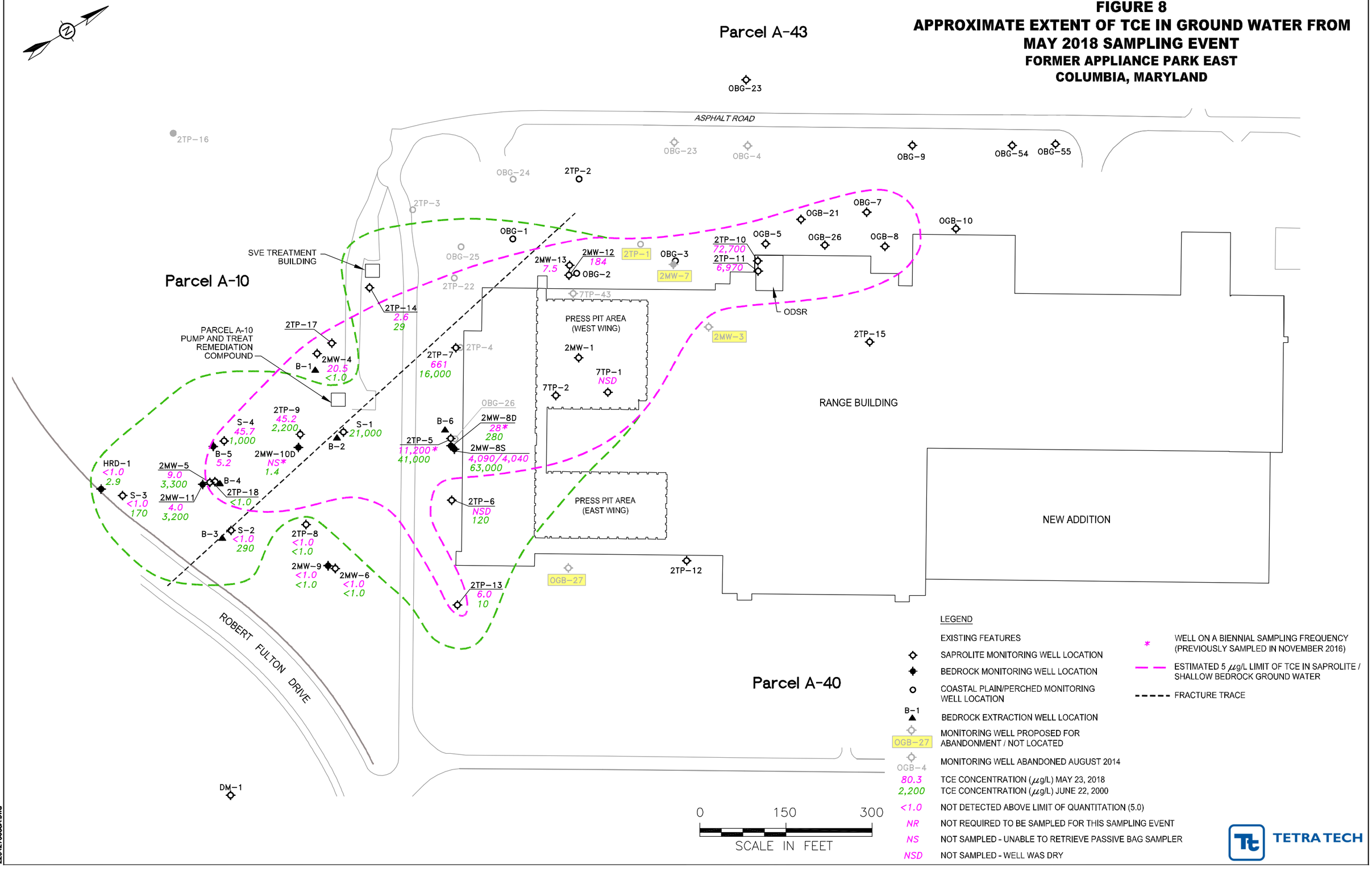
0 150 300

SCALE IN FEET

TETRA TECH

2204275057A.DWG

FIGURE 8
APPROXIMATE EXTENT OF TCE IN GROUND WATER FROM MAY 2018 SAMPLING EVENT
FORMER APPLIANCE PARK EAST
COLUMBIA, MARYLAND



LEGEND

EXISTING FEATURES

- SAPROLITE MONITORING WELL LOCATION
- BEDROCK MONITORING WELL LOCATION
- COASTAL PLAIN/PERCHED MONITORING WELL LOCATION
- B-1 BEDROCK EXTRACTION WELL LOCATION
- OGB-27 MONITORING WELL PROPOSED FOR ABANDONMENT / NOT LOCATED
- OGB-4 MONITORING WELL ABANDONED AUGUST 2014
- 80.3 TCE CONCENTRATION (μg/L) MAY 23, 2018
- 2,200 TCE CONCENTRATION (μg/L) JUNE 22, 2000
- <1.0 NOT DETECTED ABOVE LIMIT OF QUANTITATION (5.0)
- NR NOT REQUIRED TO BE SAMPLED FOR THIS SAMPLING EVENT
- NS NOT SAMPLED - UNABLE TO RETRIEVE PASSIVE BAG SAMPLER
- NSD NOT SAMPLED - WELL WAS DRY
- * WELL ON A BIENNIAL SAMPLING FREQUENCY (PREVIOUSLY SAMPLED IN NOVEMBER 2016)
- ESTIMATED 5 μg/L LIMIT OF TCE IN SAPROLITE / SHALLOW BEDROCK GROUND WATER
- FRACTURE TRACE

TETRA TECH

220427G038A.DWG

TABLE 1
Groundwater Elevations for Monitoring Wells at CMS Units 2 and 7
May 4, 2018
Former Appliance Park East Facility, Columbia, Maryland

Well ID	Interpreted Lithology	Reference Point Elevation (ft > MSL)	Well Depth (ft BGS)	Well Screen Length (ft)	Well Screen Top (ft BGS)	Well Screen Bottom (ft BGS)	Screen Top Elevation (ft > MSL)	Screen Bottom Elevation (ft > MSL)	Sampling Frequency**	Water Level Monitoring Frequency	Depth to Water on May 4, 2018 (ft BRE)	Groundwater Elevation on May 4, 2018 (ft > MSL)
SAPROLITE / WATER TABLE												
7TP-1	Saprolite	345.76	24	20	4	24	342	322	Annually	Semi-Annually	DRY	DRY
2TP-5	Saprolite	358.02	63	15	48	63	308.38	293.38	Biennially	Semi-Annually	59.28	298.74
2TP-6	Saprolite	358.79	50	15	35	50	321.41	306.41	Annually	Semi-Annually	DRY	DRY
2TP-7	Saprolite	358.76	59	15	44	59	313.16	298.16	Biennially	Semi-Annually	42.86	315.90
2TP-8	Saprolite	348.67	62	15	47	62	299.11	284.11	Annually	Semi-Annually	39.05	309.62
2TP-9	Saprolite	348.85	55	15	40	55	305.95	290.95	Semi-Annually	Semi-Annually	41.42	307.43
2TP-10	Coastal Plain & Saprolite	358.95	23	10	13	23	345	335	Annually	Semi-Annually	18.77	340.18
2TP-11	Coastal Plain & Saprolite	357.57	30	10	20	30	338	328	Annually	Semi-Annually	19.04	338.53
2TP-13	Saprolite	362.11	59	15	44	59	315.58	300.58	Annually	Semi-Annually	56.41	305.70
2TP-14	Saprolite	348.85	48	15	33	48	314.77	299.77	Annually	Semi-Annually	29.23	319.62
2TP-17	Saprolite	349.29	47	15	32	47	314.8	299.8	None	Semi-Annually	37.68	311.61
2TP-18	Saprolite	346.42	43	15	28	43	316.02	301.02	None	Semi-Annually	37.18	309.24
2MW-4	Saprolite	348.8	46	20	26	46	320.31	300.31	Semi-Annually	Semi-Annually	38.14	310.66
2MW-5	Saprolite	346.06	68	15	53	68	290.87	275.87	Semi-Annually	Semi-Annually	36.98	309.08
2MW-6	Saprolite	350.13	44	15	29	44	318.6	303.6	Semi-Annually	Semi-Annually	40.17	309.96
2MW-12	Saprolite	353.61	36	15.0	21.0	36.0	332.57	317.57	Annually	Semi-Annually	30.41	323.20
2MW-13	Coastal Plain/Perched	353.42	11	8	3	11	350.69	342.69	Annually	Semi-Annually	2.60	350.82
S-1	Saprolite	349.94	41	30	11	41	336.9	306.9	None	Semi-Annually	DRY	DRY
S-2	Saprolite	346.89	50	30	20	50	325.06	295.06	Semi-Annually	Semi-Annually	36.88	310.01
S-3	Saprolite	347.69	50	30	20	50	325.78	295.78	Semi-Annually	Semi-Annually	35.79	311.90
S-4	Saprolite	346.14	50	30	19	49	325.23	295.23	Annually	Semi-Annually	36.82	309.32
BEDROCK												
2MW-8S	Bedrock	359.24	128	20	108	128	248.8	228.8	Semi-Annually	Semi-Annually	60.14	299.10
2MW-9	Bedrock	349.45	93	20	73	93	274.47	254.47	Semi-Annually	Semi-Annually	38.98	310.47
2MW-11	Bedrock	345.54	120	20	100	120	243.61	223.61	Semi-Annually	Semi-Annually	35.07	310.47
2MW-8D	Bedrock	359.09	208	15	193	208	163.43	148.43	Biennially	Semi-Annually	43.85	315.24
2MW-10D	Bedrock	348.56	200	24	176	200	170.08	146.08	Biennially	Semi-Annually	30.79	317.77
HRD-1	Bedrock	341.11	140	20	120	140	221.11	201.11	Semi-Annually	Semi-Annually	28.00	313.11
B-5	Bedrock	345.99	140	86	54	140	290.08	204.08	Semi-Annually	Semi-Annually	36.75	309.24

NOTES:

BGS = below ground surface
BRE = below reference elevation
ft = feet
> MSL = above mean sea level

** Semi-annual frequency: May/June and November/December. Annual frequency: May/June. Biennial sampling: May/June of even years starting in 2012.

The low set points for the pump-and-treat system recovery (extraction) wells are: B-1: 298.97 ft MSL; B-2: 301.07 ft MSL; B-3: 306.43 ft MSL; B-4: 301.37 ft MSL; and B-6: 297.00 ft MSL.

TABLE 2
VOC Detections for CMS Units 2 and 7 Groundwater Monitoring
May 23, 2018
Former Appliance Park East Facility, Columbia, Maryland

Well - Sample ID	Trichloroethene (ug/L)	Cis-1,2-dichloroethene (ug/L)	Trans-1,2-dichloroethene (ug/L)	1,1-Dichloroethane (ug/L)	1,1-Dichloroethene (ug/L)	Tetrachloroethene (ug/L)	Chloroform (ug/L)	1,1,2-Trichloroethane (ug/L)	Vinyl Chloride (ug/L)
Saprolite / Water Table									
7TP-1	NSD	NSD	NSD	NSD	NSD	NSD	NSD	NSD	NSD
2TP-5*	**11,200**	**750**	**6.1**	**5.4**	**10.6**	**2.5**	<1.0	<1.0	**7.0**
2TP-6	NSD	NSD	NSD	NSD	NSD	NSD	NSD	NSD	NSD
2TP-7*	**661**	**51.2**	<1.0	<1.0	**1.1**	<1.0	<1.0	<1.0	<1.0
2TP-8	<1.0	**1.3**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2TP-9	**45.2**	**232**	**5.0**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2TP-10[CS]	**72,700**	**61.7**	**5.2**	**2.0**	**5.6**	**83.2**	**9.8**	**29.3**	<1.0
2TP-11[CS]	**6,970**	**26.6**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2TP-13	**6.0**	**2.6**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2TP-14	**2.6**	**44.6**	**2.3**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2MW-4	**20.5**	**3.1**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2MW-5	**9.0**	**5.1**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2MW-6	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2MW-12	**184**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2MW-13[CP]	**7.5**	**2.9**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
S-2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
S-3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
S-4	**45.7**	**69.3**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bedrock									
2MW-8S	**4,090 / 4,040**	**623 / 622**	**6.8 / 7.4**	<1.0 / <1.0	**4.5 / 4.3**	<1.0 / <1.0	<1.0 / <1.0	<1.0 / <1.0	**2.0 / 1.9**
2MW-9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2MW-11	**4.0**	**23.4**	**2.8**	<1.0	**3.6**	**10.7**	**2.1**	**1.9**	<1.0
2MW-8D*	**28**	**1.4**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2MW-10D*	NS	NS	NS	NS	NS	NS	NS	NS	NS
HRD-1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
B-5	**5.2**	**23.4**	**1.0**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Field Blank	**3.8**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

NOTES:

ug/L = Micrograms per liter

/ = Duplicate samples

NR = well not sampled - not required for this sampling event

NS = Not sampled - unable to retrieve passive bag sampler

NSD = Not sampled due to well being dry or had insufficient volume of water

MW-12, MW-13, 2TP-10, and 2TP-11 added to semi-annual sampling in June 2011

Starting in November 2009 samples analyzed using EPA Method 8260

< = result is less than or not detected at this limit of quantitation

[CS] Costal Plain & Saprolite

[CP] Coastal Plain/Perched Well

* Well on a biennial sampling frequency.

TABLE 3
Historical TCE Analytical Results for CMS Units 2 and 7 Groundwater Monitoring
Former Appliance Park East Facility, Columbia, Maryland

Well - Sample ID	Well Depth (ft BGS)	Well Screen (ft BGS) Top (ft BGS)	Well Screen (ft BGS) Bottom (ft BGS)	5/16/2008 TCE (µg/L)	11/20/2008 TCE (µg/L)	5/29/2009 TCE (µg/L)	11/3/2009 TCE (µg/L)	5/21/2010 TCE (µg/L)	11/19/2010 TCE (µg/L)	6/6/2011 TCE (µg/L)	11/18/2011 TCE (µg/L)	5/21/2012 TCE (µg/L)	11/16/2012 TCE (µg/L)	5/30/2013 TCE (µg/L)	11/25/2013 TCE (µg/L)
Saprolite / Water Table															
7TP-1	24	4.0	24.0	NC	NC	NC	NC	NC	NC	NSD	NR	NSD	NR	NSD	NR
2TP-5*	**63.0**	**48.0**	**63.0**	**32,000**	NR	**36,000**	NR	**33,000**	NR	NR	NR	**25,000**	NR	NR	NR
2TP-6	50.0	35.0	50.0	NSD	NSD	NSD	NSD	NSD	<1.0	NSD	NR	NSD	NR	NSD	NR
2TP-7*	**59.0**	**44.0**	**59.0**	**3,800**	**3,200**	**4,200**	**3,200**	**2,800**	**2,300**	NR	NR	**2,200**	NR	NR	NR
2TP-8	62.0	47.0	62.0	<2.0	<0.5	<0.5	<1.0	<1.0	<1.0	<5.0	NR	<5.0	NR	<5.0	NR
2TP-9	55.0	40.0	55.0	**930**	**820**	**940**	**760**	**690**	**570**	**450**	**240**	**220**	**270**	**240**	**240**
2TP-10[CS]	21.9	13.0	23.0	NC	NC	NC	NC	NC	NC	**68,000**	NR	**58,000**	NR	**53,000**	NR
2TP-11[CS]	30.0	19.2	30.0	NC	NC	NC	NC	NC	NC	**5,400**	NR	**7,800**	NR	**6,400**	NR
2TP-13	59.0	44.0	59.0	<2.0	**0.7**	**0.5**	<1.0	<1.0	<1.0	**7.0**	NR	**10**	NR	**10**	NR
2TP-14	58.0	43.0	58.0	**4.4**	**3.6**	**3.1**	**2.0 J**	**3.0 J**	**4.0 J**	<5.0	NR	<5.0	NR	<5.0	NR
2MW-4	46.0	26.0	46.0	**10.0**	**9.4**	**13**	**11**	**14**	**16**	**22**	**20**	**30**	<5.0	**33**	**33**
2MW-5	68.0	53.0	68.0	**66**	**47**	**53**	**45**	**42**	**35**	**35**	**29**	**32**	**28**	**25**	**22**
2MW-6	44.0	29.0	44.0	<2.0	<0.5	<0.5	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2MW-12	34.9	19.9	34.9	NC	NC	NC	NC	NC	NC	**1,900**	NR	**2,000**	NR	**1,200**	NR
2MW-13[CP]	11.0	3.0	11.0	NC	NC	NC	NC	NC	NC	**21**	NR	**9.0**	NR	**13**	NR
S-2	50.0	20.0	50.0	**9.4**	**7.4**	**5.7**	**5.0 J**	**5.0 J**	**3.0 J**	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
S-3	50.0	20.0	50.0	**2.7**	**2.1**	**1.5**	**2.0 J**	**1.0 J**	**1.0 J**	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
S-4	50.0	20.0	50.0	**410**	NR	**330**	NR	**240**	NR	<5.0	NR	**280**	NR	**220**	NR
Bedrock															
2MW-8S	128.0	108.0	128.0	**13,000**	**12,000**	**11,000**	**13,000**	**6,500**	**11,000**	**37,000**	**34,000 / 33,000**	**29,000 / 30,000**	**30,000 / 32,000**	**28,000 / 30,000**	**23,000 / 23,000**
2MW-9	93.0	73.0	93.0	<2.0	<0.5	<0.5	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
2MW-11	120.0	100.0	120.0	**140**	**110**	**130**	**160**	**120**	**90**	**11**	**<5.0**	**<5.0**	**15**	**11**	**8**
2MW-8D*	**208.0**	**193.0**	**208.0**	**120**	**89**	**84**	**90**	**88**	**75**	NR	NR	**71**	NR	NR	NR
2MW-10D*	**200.0**	**176.0**	**200.0**	<2.0	<0.5	<0.5	<1.0	<1.0	<1.0	NR	NR	<5.0	NR	NR	NR
HRD-1	140.0	120.0	140.0	<2.0	<0.5	<0.5	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
B-5	140.0	54.0	140.0	NS	**160 E**	**100**	**120**	**100**	**25**	**6**	**6**	**7**	**14**	**6**	**9**
Field Blank	-	-	-	<2.0	<0.5	<0.5	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0

NOTES:

ug/L = Micrograms per liter
BGS = Below ground surface
[CS] Costal Plain & Saprolite
[CP] Coastal Plain/Perched Well
/ = Duplicate samples
TCE = Trichloroethene
NC = Not collected
NA = Not avaliable

NR = Not required for this sampling event
NS = Not sampled - unable to retrieve passive bag sampler
NSD = Not sampled due to insufficient volume of water in well
< = result is less than or not detected at this limit of quantitation
MW-12, MW-13, 2TP-10, and 2TP-11 added to semi-annual sampling in June 2011
Starting in November 2009 samples analyzed using EPA Method 8260
* Well on biennial sampling frequency
Table presents concentrations from May 2008 to the present

TABLE 3
Historical TCE Analytical Results for CMS Units 2 and 7 Groundwater Monitoring
Former Appliance Park East Facility, Columbia, Maryland

Well - Sample ID	Well Depth (ft BGS)	Well Screen (ft BGS) Top (ft BGS)	Well Screen (ft BGS) Bottom (ft BGS)	5/27/2014 TCE (µg/L)	11/21/2014 TCE (µg/L)	5/22/2015 TCE (µg/L)	11/20/2015 TCE (µg/L)	5/27/2016 TCE (µg/L)	11/18/2016 TCE (µg/L)	6/2/2017 TCE (µg/L)	11/10/2017 TCE (µg/L)	5/23/2018 TCE (µg/L)
Saprolite / Water Table												
7TP-1	24	4.0	24.0	NSD	NR	NSD	NR	NR	NR	Not sampled - well was dry	Not sampled - well was dry	Not sampled - well was dry
2TP-5*	**63.0**	**48.0**	**63.0**	**20,000**	NR	NR	NR	NR	**13,100**	NR	NR	**11,200**
2TP-6	50.0	35.0	50.0	NSD	NR	<1.0	NR	NR	NR	**1.2**	NR	Not sampled - well was dry
2TP-7*	**59.0**	**44.0**	**59.0**	**1,600**	NR	NR	NR	NR	**956**	NR	NR	**661**
2TP-8	62.0	47.0	62.0	<5.0	NR	<1.0	NR	NR	NR	<1.0	NR	<1.0
2TP-9	55.0	40.0	55.0	**190**	**198**	**142**	**122**	**122**	**80.3**	**118**	**83.8**	**45.2**
2TP-10[CS]	21.9	13.0	23.0	**54,000**	NR	**55,300**	NR	NR	NR	**78,500**	NR	**72,700**
2TP-11[CS]	30.0	19.2	30.0	**7,000**	NR	**7,240**	NR	NR	NR	**8,320**	NR	**6,970**
2TP-13	59.0	44.0	59.0	**9.0**	NR	**8.9**	NR	NR	NR	**8.1**	NR	**6.0**
2TP-14	58.0	43.0	58.0	<5.0	NR	**5.7**	NR	NR	NR	**3.1**	NR	**2.6**
2MW-4	46.0	26.0	46.0	**29**	**33**	**29.4**	**31.3**	**31.3**	**34**	**28.4**	**22.8**	**20.5**
2MW-5	68.0	53.0	68.0	**22**	**21.7**	**15.7**	**16**	**16**	**13.3**	**12.6**	**10.7**	**9.0**
2MW-6	44.0	29.0	44.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2MW-12	34.9	19.9	34.9	**1,000**	NR	**292**	NR	NR	NR	**219**	NR	**184**
2MW-13[CP]	11.0	3.0	11.0	**11**	NR	**11.8**	NR	NR	NR	**10**	NR	**7.5**
S-2	50.0	20.0	50.0	<5.0	**1.6**	**1.0**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
S-3	50.0	20.0	50.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
S-4	50.0	20.0	50.0	**150**	NR	**103**	NR	NR	NR	**91.7**	NR	**45.7**
Bedrock												
2MW-8S	128.0	108.0	128.0	**18,000 / 18,000**	**14,700 / 16,800**	**14,700 / 13,600**	**13,300 / 13,300**	**13,300 / 13,300**	**10,600 / 11,500**	**10,600 / 9,160**	**9,150 / 8,040**	**4,090 / 4,040**
2MW-9	93.0	73.0	93.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2MW-11	120.0	100.0	120.0	**11**	**6.3**	**5.2**	**5.2**	**5.2**	**4.1**	**2.9**	**3.5**	**4.0**
2MW-8D*	**208.0**	**193.0**	**208.0**	**53**	NR	NR	NR	NR	**34.7**	NR	NR	**28**
2MW-10D*	**200.0**	**176.0**	**200.0**	<5.0	NR	NR	NR	NR	<1.0	NR	NR	NS
HRD-1	140.0	120.0	140.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
B-5	140.0	54.0	140.0	**9**	**10.2**	**6**	**7.4**	**7.4**	**5.9**	**5.9**	**5.1**	**5.2**
Field Blank	-	-	-	<5.0	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**3.8**

NOTES:

ug/L = Micrograms per liter
BGS = Below ground surface
[CS] Costal Plain & Saprolite
[CP] Coastal Plain/Perched Well
/ = Duplicate samples
TCE = Trichloroethene
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< = result is less than or not detected at this limit of quantitation
MW-12, MW-13, 2TP-10, and 2TP-11 added to semi-annual sampling in June 2011
Starting in November 2009 samples analyzed using EPA Method 8260
* Well on biennial sampling frequency
Table presents concentrations from May 2008 to the present

ATTACHMENT 3

To Semi-Annual Project Progress Report
RCRA Corrective Action Permit
No. MDD046279311

General Electric Co.
Former Appliance Park East Facility
Columbia, MD

Period January 1, 2018 to June 30, 2018

Phase II SVE System Decommissioning Report
July 2018 – RFI Units 2 and 7

TETRA TECH

July 17, 2018

Mr. Kevin Mooney
General Electric Company
319 Great Oaks Boulevard
Albany, New York 12203-5965

RE: SVE System Decommissioning Report
Former Appliance Park East Facility
Columbia, Maryland 21046

Dear Mr. Mooney:

Tetra Tech has completed the decommissioning of the soil vapor extraction (SVE) system at the former Appliance Park East in Columbia, Maryland (Figure 1). The system decommissioning was approved by the U.S. Environmental Protection Agency (EPA) in its email dated January 24, 2018. The decommissioning activities involved the following tasks and were completed from May 21 to 24, 2018:

I. **Preparatory Tasks:**
   1. Tetra Tech subcontracted US Ecology to provide transportation and disposal for the six (6) 200-pound drums of spent granular activated carbon (GAC) and filter element from the SVE system. These wastes were incinerated due to the concentrations of trichloroethene (TCE) per February 2018 analytical results.
   2. Baltimore Gas & Electric (BGE) disconnected the SVE system's electric service and removed the electric meter on April 5, 2018.
   3. Miss Utility cleared/marked out subsurface utilities in the work area on May 15, 2018.

II. **Well Abandonment:** Ground Zero Field Environmental Services, a licensed driller, abandoned all 21 SVE wells (TVE-1S, TVE-1D, TVE-11S, TVE-11D, TVE-12S, TVE-12D, TPA-1 through TPA-5, and PVE-1 through PVE-10) on May 21-23, 2018 in accordance with Maryland Department of Environment (MDE) requirements.
   1. All wells were filled with grout/concrete to the surface.
   2. The well pads remained in place except for one well pad (TPAI-3) in the parking lot which was cracked. That pad was removed and asphalt was poured to level the surface.
   3. The required well abandonment forms were submitted to the Maryland Department of the Environment (MDE).

III. **System Decommissioning:** S&S Technologies, Inc. (S&S) completed the following tasks from May 21 to 24, 2018:
   1. Removed all SVE hoses running on the floor and manifolds on the walls in the western wing of the former Press Pit (basement of former Range Building) and placed them in a roll-off dumpster designated for general debris.
   2. Sealed all penetrations in the Press Pit concrete floor related to the SVE system.
   3. Sealed areas of air leakage along the basement floor with Flex Seal.
   4. Removed piping coming out through the Press Pit/basement roof. Repaired roofing plywood and installed asphalt patch. Placed piping in general debris roll-off dumpster.

TETRA TECH
51 Franklin Street, Suite 400, Annapolis, MD 21401
Tel 410.990.4607 Fax 410-990-4749 www.tetratech.com

5. Excavated and removed steel piping sticking up at the entrance of the Press Pit. Capped SVE lines in situ and placed steel piping in roll-off dumpster designated for scrap metal.
6. Removed vault junction box next to entrance of the Press Pit and placed in scrap metal roll-off dumpster. Broke up and removed concrete pad surrounding vault and placed in concrete roll-off dumpster. Capped SVE lines and left in place. Backfilled with top soil and seed.
7. Drained oil from SVE blower and took it off-site for recycling.
8. Removed all equipment inside SVE system shed and placed in scrap metal or general debris roll-off dumpster as appropriate.
9. Disassembled SVE metal shed and placed in scrap metal roll-off dumpster.
10. Removed all electric panels and supports and placed in scrap metal or general debris roll-off dumpster as appropriate.
11. Excavated piping next to SVE shed and capped lines below ground and placed removed piping in appropriate roll-off dumpster.
12. Piping buried in the trench from the Press Pit (in Parcel A-40) to the SVE system shed (in Parcel A-10) remained in the trench buried and sealed off. Glued PVC pipe caps and placed caps on HDPE pipe using had electrofusion.
13. Removed concrete pad under SVE shed; backfilled with top soil and seed. Placed concrete in roll-off dumpster designated for concrete debris.

IV. **Oversight and Documentation:** Tetra Tech was on-site during the duration of the field work to document the well abandonment and system decommissioning activities. Selected photos of the work are in **Appendix A**. Copies of the waste manifest and well abandonment reports are in **Appendix B**.

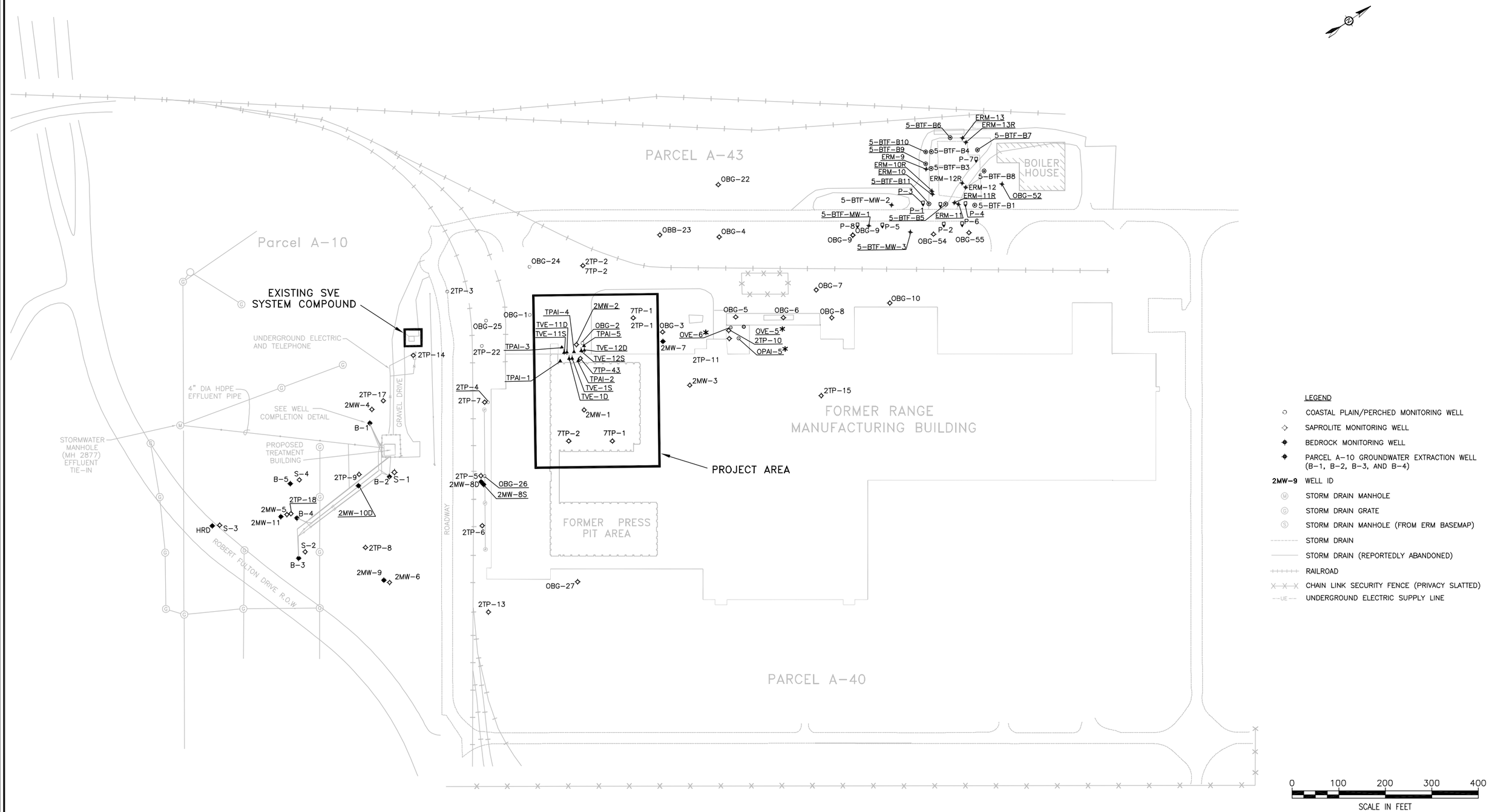
Please contact me at 410-990-4607 should you have any questions regarding the decommissioning activities.

Sincerely,
Tetra Tech

Belssi Chang Lee
Senior Project Manager/Engineer

Attachments:

Figure 1: General Site Plan
Appendix A: Photographs
Appendix B: Waste Manifest and Well Abandonment Forms



LEGEND

- ○ COASTAL PLAIN/PERCHED MONITORING WELL
- ◇ SAPROLITE MONITORING WELL
- ◆ BEDROCK MONITORING WELL
- ◆ PARCEL A-10 GROUNDWATER EXTRACTION WELL (B-1, B-2, B-3, AND B-4)
- **2MW-9** WELL ID
- Ⓜ STORM DRAIN MANHOLE
- Ⓖ STORM DRAIN GRATE
- Ⓢ STORM DRAIN MANHOLE (FROM ERM BASEMAP)
- STORM DRAIN
- STORM DRAIN (REPORTEDLY ABANDONED)
- RAILROAD
- CHAIN LINK SECURITY FENCE (PRIVACY SLATTED)
- UE UNDERGROUND ELECTRIC SUPPLY LINE

APPROVED BY:

STATE OF MARYLAND — PETER A. RICH — NO. 21093 — REGISTERED PROFESSIONAL ENGINEER

DATE	REVISION	APRVD.

PROJECT: **SVE SYSTEM EXPANSION - PRESS PIT (WEST WING)**

TITLE: **GENERAL SITE PLAN**

LOCATION: **Parcels A-10 and A-40, Former Appliance Park East Facility Columbia, Maryland**

TETRA TECH GEO

APPROVED	PR
DRAFTED	CP
PROJECT#	117-2204200
DATE	6-7-11

DRAWING **2**

2204200365.mxd

APPENDIX A

PHOTOGRAPHS

SOIL VAPOR EXTRACTION SYSTEM DECOMMISSION – MAY 21-24, 2018
FORMER APPLIANCE PARK EAST FACILITY, COLUMBIA, MARYLAND

1 Well pad TPAI-3 with crack along bottom

2 Example well (TVE-11D) filled with grout to surface

3 SVE Pipe in basement prior to removal

4 SVE pipe in basement removed and placed in general debris roll-off dumpster

SOIL VAPOR EXTRACTION SYSTEM DECOMMISSION – MAY 21-24, 2018
FORMER APPLIANCE PARK EAST FACILITY, COLUMBIA, MARYLAND

5 Example of sealing in progress of press pit floor penetration (PVE-9)

6 Area of air leakage in basement post-sealing

7 SVE piping removed from Press Pit/basement roof.

8 Capped SVE lines leading from Press Pit

9 Trench backfilled with topsoil and excavated materials.

10 Patch of basement roof where piping was removed; wood plank underlies patch.

SOIL VAPOR EXTRACTION SYSTEM DECOMMISSION – MAY 21-24, 2018
FORMER APPLIANCE PARK EAST FACILITY, COLUMBIA, MARYLAND

11 Removal of vault junction box and demolition of concrete pad.

12 Work area graded after junction box removal.

13 SVE shed demolished and debris sorted for appropriate disposal. SVE lines capped and utility panels removed.

14 Demolition and removal of concrete pad underlying SVE shed

15 Shed work area graded and seeded after shed and pad removal (Picture taken June 6, 2018).

16 Staging area for equipment and topsoil post-SVE system decommissioning (Picture taken June 6, 2018)

APPENDIX B

WASTE MANIFEST

WELL ABANDONMENT FORMS

336608

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: MDD 046 279 311
2. Page 1 of: 1
3. Emergency Response Phone: (800) 839-3975
4. Manifest Tracking Number: 018345530 JJK

GENERATOR

5. Generator's Name and Mailing Address: GENERAL ELECTRIC
8700 ROBERT FULTON DRIVE
COLUMBIA, MD 21046
Generator's Phone: (301) 442-3918

Generator's Site Address (if different than mailing address): c/o Tetra Tech 51 Franklin ST, Annapolis, MD 21401

6. Transporter 1 Company Name: EQ NORTHEAST, INC.
U.S. EPA ID Number: MAD 084 814 136

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: ROSS INCINERATION SERVICES, INC.
36790 GILES ROAD
GRAFTON, OH 44044
Facility's Phone: (440) 748-5800
U.S. EPA ID Number: OHD 048 415 665

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. NA3077, Hazardous Waste, solid, n.o.s. (trichloroethylene), 9, PGIII, ERG #171	006	DM	2400 EST.	P	U228
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. WPS #143387 / spent granular activated carbon / 6x55

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: DELSSI CHANG for GE
Signature: Delssi Chang Lee
Month: 03 Day: 27 Year: 18

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: STEVEN SCHMITT
Signature:
Month: 03 Day: 27 Year: 18

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Jayne Fitz
Signature: Jayne Fitz
Month: 3 Day: 28 Year: 18

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

336608

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: MDD 046 279 311
2. Page 1 of: 1
3. Emergency Response Phone: (800) 839-3975
4. Manifest Tracking Number: 018345530 JJK

GENERATOR

5. Generator's Name and Mailing Address: GENERAL ELECTRIC
8700 ROBERT FULTON DRIVE
COLUMBIA, MD 21046
Generator's Phone: (301) 442-3918

Generator's Site Address (if different than mailing address): c/o Tetra Tech 51 Franklin ST, Annapolis, MD 21401

6. Transporter 1 Company Name: EQ NORTHEAST, INC.
U.S. EPA ID Number: MAD 084 814 136

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: ROSS INCINERATION SERVICES, INC.
36790 GILES ROAD
GRAFTON, OH 44044
Facility's Phone: (440) 748-5800
U.S. EPA ID Number: OHD 048 415 665

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. NA3077, Hazardous Waste, solid, n.o.s. (trichloroethylene), 9, PGIII, ERG #171	006	DM	2400 EST.	P	U228
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. WPS #143387 / spent granular activated carbon / 6x55

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: DELSSI CHANG for GE
Signature: Delssi Chang Lee
Month: 03 Day: 27 Year: 18

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: STEVEN SCHMITT
Signature:
Month: 03 Day: 27 Year: 18

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H040			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Jayne Fitz
Signature: Jayne Fitz
Month: 3 Day: 28 Year: 18

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

MARYLAND DEPARTMENT OF THE ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION
1800 Washington Blvd., Baltimore, Maryland 21230 (410) 537-3784

****

WATER WELL ABANDONMENT-SEALING REPORT FORM

****

SUBMIT COPIES OF COMPLETED FORM TO:

* COUNTY ENVIRONMENT AGENCY (contact MDE, WMA if address needed)
* WELL OWNER
* MDE, WATER MANAGEMENT ADMINISTRATION, WELL PROGRAM

DATE WELL ABANDONED: 5/24/2018 (month/day/year)

* PERMIT NUMBER OF ABANDONED WELL (if any) IVE -12-D

* PERMIT NUMBER OF REPLACEMENT WELL

* PERSON ABANDONING WELL: Jorge Sorto

WELL DRILLERS LICENSE NUMBER: 075
CIRCLE: MWD/MSD/MGD

* OWNER'S NAME: Gateway Owner II 46 LLC

SITE LOCATION MAP

* WELL LOCATION:
COUNTY: Howard County
NEAREST TOWN: Columbia
TAX MAP 0042 BLOCK 0006 PARCEL 0513
SUBDIVISION: 0000
SECTION: N/A LOT: A40
NEAREST ROAD: Commerce Center Rd

* TYPE OF WELL BEING ABANDONED:

___ DRILLED ___ JETTED
___ BORED/AUGERED ___ HAND DUG
___ OTHER (specify) ___

* USE CODE:

___ DOMESTIC ___ MUNICIPAL/PUBLIC
___ IRRIGATION ___ INDUSTRIAL
___ TEST/OBSERVATION ___ GEOTHERMAL

* TYPE OF CASING:

___ STEEL ___ PLASTIC
___ CONCRETE ___ OTHER (specify)

* SIZE OF CASING: 4 INCHES IN DIAMETER

* DEPTH OF WELL: 13.4 FEET DEEP

* WAS ANY CASING REMOVED? ___ YES X NO
if yes, length removed, in feet: ___

* WAS CASING RIPPED OR PERFORATED? ___ YES X NO

LOG OF SEALING MATERIAL

MATERIAL	FEET FROM	FEET TO
Bentonite	0	
Water		
Grout		13.4

VOLUME OF MATERIAL USED

Grout
Bentonite Layer

Scott Lenton — 075 — MWD/MSD/MGD — 5/25/18

SIGNATURE-MASTER WELL DRILLER OR SUPERVISING SANITARIAN — LICENSE # — CIRCLE ONE — DATE

DENV 828 JULY 1997

1) MDE

MARYLAND DEPARTMENT OF THE ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION
1800 Washington Blvd., Baltimore, Maryland 21230 (410) 537-3784

WATER WELL ABANDONMENT-SEALING REPORT FORM

SUBMIT COPIES OF COMPLETED FORM TO:

* COUNTY ENVIRONMENT AGENCY (contact MDE, WMA if address needed)
* WELL OWNER
* MDE, WATER MANAGEMENT ADMINISTRATION, WELL PROGRAM

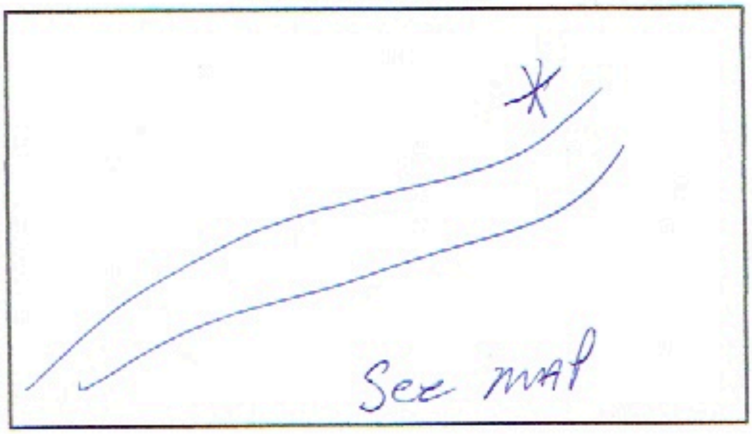
DATE WELL ABANDONED: 5/24/2018 (month/day/year)

* PERMIT NUMBER OF ABANDONED WELL (if any) HVE - 12 - 5
* PERMIT NUMBER OF REPLACEMENT WELL - -
* PERSON ABANDONING WELL: Jorge Sorto

WELL DRILLERS LICENSE NUMBER: 075
CIRCLE: MWD/MSD/MGD (MGD circled)

* OWNER'S NAME: Gateway Owner A 40 LLC
* WELL LOCATION:
  COUNTY: Howard County
  NEAREST TOWN: Columbia
  TAX MAP 0042 BLOCK 0006 PARCEL 0513
  SUBDIVISION: 0000
  SECTION: N/A LOT: A40
  NEAREST ROAD: Commerce Center RD

SITE LOCATION MAP



* TYPE OF WELL BEING ABANDONED:
  - ✓ DRILLED
  - ___ JETTED
  - ___ BORED/AUGERED
  - ___ HAND DUG
  - ___ OTHER (specify) ___

* USE CODE:
  - ___ DOMESTIC
  - ___ MUNICIPAL/PUBLIC
  - ___ IRRIGATION
  - ___ INDUSTRIAL
  - ✓ TEST/OBSERVATION
  - ___ GEOTHERMAL

* TYPE OF CASING:
  - ___ STEEL
  - ✓ PLASTIC
  - ___ CONCRETE
  - ___ OTHER (specify) ___

* SIZE OF CASING: 4 INCHES IN DIAMETER
* DEPTH OF WELL: 11.4 FEET DEEP
* WAS ANY CASING REMOVED? ___ YES ✓ NO
  if yes, length removed, in feet: ___
* WAS CASING RIPPED OR PERFORATED? ___ YES ✓ NO

LOG OF SEALING MATERIAL

MATERIAL	FEET FROM	FEET TO
Bentonite	0	
Water		
Grout		11.4

VOLUME OF MATERIAL USED

Grout 215 LB
Bentonite 15 LB
Water 45 GAL

[signature]
SIGNATURE-MASTER WELL DRILLER OR SUPERVISING SANITARIAN

075
LICENSE #

MWD/MSD/MGD (MGD circled)
CIRCLE ONE

5/25/18
DATE

DENV 828 JULY 1997

MARYLAND DEPARTMENT OF THE ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION
1800 Washington Blvd., Baltimore, Maryland 21230 (410) 537-3784

****

WATER WELL ABANDONMENT - SEALING REPORT FORM

****

SUBMIT COPIES OF COMPLETED FORM TO:

* COUNTY ENVIRONMENT AGENCY (contact MDE, WMA if address needed)
* WELL OWNER
* MDE, WATER MANAGEMENT ADMINISTRATION, WELL PROGRAM

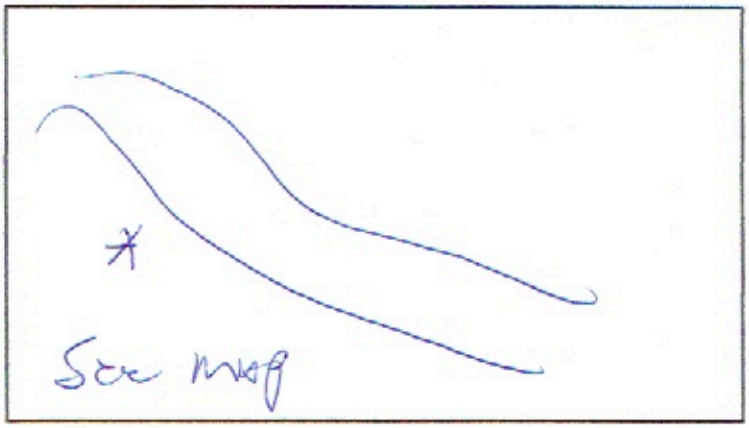
DATE WELL ABANDONED: 5/24/2018 (month/day/year)

* PERMIT NUMBER OF ABANDONED WELL (if any) ~~PVE~~ – 10 –
* PERMIT NUMBER OF REPLACEMENT WELL – –
* PERSON ABANDONING WELL: Jorge Sonto
* OWNER'S NAME: Gateway Owner A 40 LLC

WELL DRILLERS LICENSE NUMBER: 075
CIRCLE: MWD/MSD/MGD

* WELL LOCATION:
  COUNTY: Howard County
  NEAREST TOWN: Columbia
  TAX MAP 0042 BLOCK 0006 PARCEL 0513
  SUBDIVISION: 0000
  SECTION: N/A LOT: A40
  NEAREST ROAD: Commerce Center RD

SITE LOCATION MAP



* TYPE OF WELL BEING ABANDONED:
  - ___ DRILLED ___ JETTED
  - ___ BORED/AUGERED ___ HAND DUG
  - ___ OTHER (specify) ___

* USE CODE:
  - ___ DOMESTIC ___ MUNICIPAL/PUBLIC
  - ___ IRRIGATION ___ INDUSTRIAL
  - ___ TEST/OBSERVATION ___ GEOTHERMAL

* TYPE OF CASING:
  - ___ STEEL ___ PLASTIC
  - ___ CONCRETE ___ OTHER (specify) ___

* SIZE OF CASING: 2 INCHES IN DIAMETER
* DEPTH OF WELL: 14 FEET DEEP
* WAS ANY CASING REMOVED? ___ YES ___ NO
  if yes, length removed, in feet: ___
* WAS CASING RIPPED OR PERFORATED? ___ YES ___ NO

LOG OF SEALING MATERIAL

MATERIAL	FEET FROM	FEET TO
Bentonite	0	
Water		
Grout		14

VOLUME OF MATERIAL USED

Grout 1.5 LB
Bentonite 1.5 LB
Water 2 gal

Scott Leyton — 075 — MWD/MSD/MGD — 5/25/18

SIGNATURE-MASTER WELL DRILLER OR SUPERVISING SANITARIAN — LICENSE # — CIRCLE ONE — DATE

DENV 828 JULY 1997

MARYLAND DEPARTMENT OF THE ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION
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* WELL OWNER
* MDE, WATER MANAGEMENT ADMINISTRATION, WELL PROGRAM

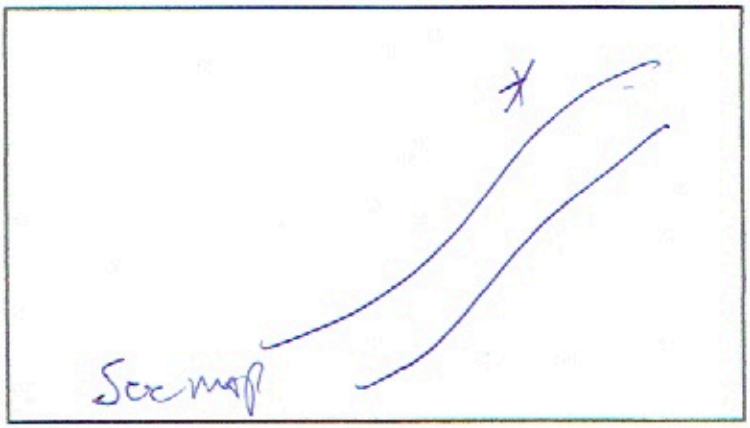
DATE WELL ABANDONED: 5/24/2018 (month/day/year)

* PERMIT NUMBER OF ABANDONED WELL (if any) PUE - 9 -
* PERMIT NUMBER OF REPLACEMENT WELL — —
* PERSON ABANDONING WELL: Jorge Sosto
* OWNER'S NAME: Gateway Owner A 46 LLC

WELL DRILLERS LICENSE NUMBER: 075
CIRCLE: MWD/MSD/MGD

* WELL LOCATION:
COUNTY: Howard County
NEAREST TOWN: Columbia
TAX MAP 0042 BLOCK 0006 PARCEL 0513
SUBDIVISION: 0000
SECTION: N/A LOT: A40
NEAREST ROAD: Commerce Center Rd

SITE LOCATION MAP



* TYPE OF WELL BEING ABANDONED:

__1__ DRILLED _____ JETTED
_____ BORED/AUGERED _____ HAND DUG
_____ OTHER (specify) _____

* USE CODE:

_____ DOMESTIC _____ MUNICIPAL/PUBLIC
_____ IRRIGATION _____ INDUSTRIAL
__1__ TEST/OBSERVATION _____ GEOTHERMAL

* TYPE OF CASING:

_____ STEEL _____ PLASTIC
_____ CONCRETE _____ OTHER (specify)
_____

* SIZE OF CASING: 2 INCHES IN DIAMETER
* DEPTH OF WELL: 9.3 FEET DEEP
* WAS ANY CASING REMOVED? ___ YES __1__ NO
if yes, length removed, in feet: _____
* WAS CASING RIPPED OR PERFORATED? ___ YES __1__ NO

LOG OF SEALING MATERIAL

MATERIAL	FEET FROM	FEET TO
Bentonite	0	
Water		
Grout		9.3

VOLUME OF MATERIAL USED
Grout 1 LB
Bentonite 1 LB
Water 1 gal

Scott Leyton — 075 — MWD/MSD/MGD — 5/25/18
SIGNATURE MASTER WELL DRILLER OR SUPERVISING SANITARIAN — LICENSE # — CIRCLE ONE — DATE

DENV 828 JULY 1997

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WATER WELL ABANDONMENT-SEALING REPORT FORM

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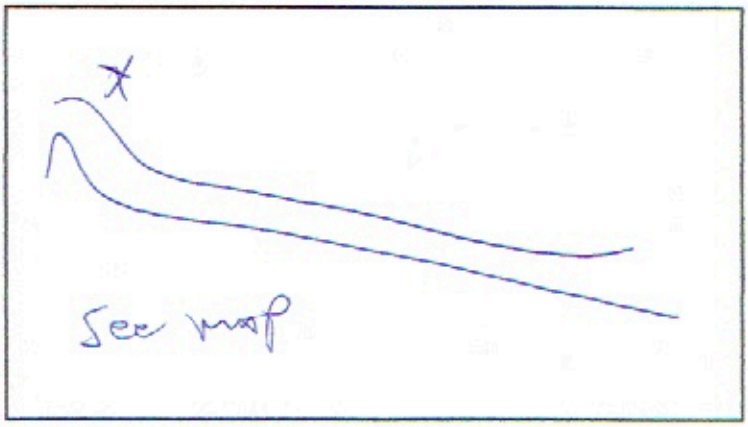
* WELL OWNER
* MDE, WATER MANAGEMENT ADMINISTRATION, WELL PROGRAM

DATE WELL ABANDONED: 5/24/2018 (month/day/year)

* PERMIT NUMBER OF ABANDONED WELL (if any): PVE – 8 –
* PERMIT NUMBER OF REPLACEMENT WELL: – –
* PERSON ABANDONING WELL: Jorge Sorto
* WELL DRILLERS LICENSE NUMBER: 075
  CIRCLE: MWD/MSD/MGD
* OWNER'S NAME: Gateway Owner A 40 LLC
* WELL LOCATION:
  COUNTY: Howard County
  NEAREST TOWN: Columbia
  TAX MAP 0042 BLOCK 0006 PARCEL 0513
  SUBDIVISION: 0000
  SECTION: N/A LOT: A40
  NEAREST ROAD: Commerce Center RD

SITE LOCATION MAP



* TYPE OF WELL BEING ABANDONED:
  ___ DRILLED ___ JETTED
  ___ BORED/AUGERED ___ HAND DUG
  ___ OTHER (specify) ___
* USE CODE:
  ___ DOMESTIC ___ MUNICIPAL/PUBLIC
  ___ IRRIGATION ___ INDUSTRIAL
  ___ TEST/OBSERVATION ___ GEOTHERMAL
* TYPE OF CASING:
  ___ STEEL ___ PLASTIC
  ___ CONCRETE ___ OTHER (specify)
* SIZE OF CASING: 2 INCHES IN DIAMETER
* DEPTH OF WELL: 12.3 FEET DEEP
* WAS ANY CASING REMOVED? ___ YES ✓ NO
  if yes, length removed, in feet: ___
* WAS CASING RIPPED OR PERFORATED? ___ YES ✓ NO

LOG OF SEALING MATERIAL

MATERIAL	FEET FROM	FEET TO
Bentonite Water Grout	0	12.3

VOLUME OF MATERIAL USED

Grout 1.5 LB
Bentonite 2 LB
Water 1.5 gal

Scott Lenfest — 075 — MWD/MSD/MGD — 5/25/18

SIGNATURE MASTER WELL DRILLER OR SUPERVISING SANITARIAN — LICENSE # — CIRCLE ONE — DATE

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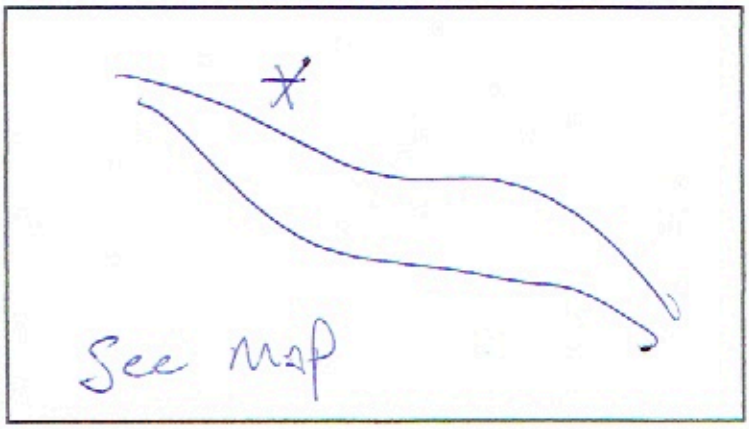
DATE WELL ABANDONED: 5/24/2018 (month/day/year)

* PERMIT NUMBER OF ABANDONED WELL (if any) PUE - 7 -
* PERMIT NUMBER OF REPLACEMENT WELL - -
* PERSON ABANDONING WELL: Jorge Sosa
* OWNER'S NAME: Gateway Owner A 40 LLC

WELL DRILLERS LICENSE NUMBER: 075
CIRCLE: MWD/MSD/MGD

* WELL LOCATION:
COUNTY: Howard County
NEAREST TOWN: Columbia
TAX MAP 0342 BLOCK 0006 PARCEL 0513
SUBDIVISION: 0000
SECTION: N/A LOT: A40
NEAREST ROAD: Commerce Center Rd

SITE LOCATION MAP



* TYPE OF WELL BEING ABANDONED:
  - ___ DRILLED
  - ___ JETTED
  - ___ BORED/AUGERED
  - ___ HAND DUG
  - ___ OTHER (specify)

* USE CODE:
  - ___ DOMESTIC
  - ___ MUNICIPAL/PUBLIC
  - ___ IRRIGATION
  - ___ INDUSTRIAL
  - ___ TEST/OBSERVATION
  - ___ GEOTHERMAL

* TYPE OF CASING:
  - ___ STEEL
  - ___ PLASTIC
  - ___ CONCRETE
  - ___ OTHER (specify)

* SIZE OF CASING: 2 INCHES IN DIAMETER
* DEPTH OF WELL: 14.5 FEET DEEP
* WAS ANY CASING REMOVED? ___ YES NO
  if yes, length removed, in feet: ___
* WAS CASING RIPPED OR PERFORATED? ___ YES NO

LOG OF SEALING MATERIAL

MATERIAL	FEET FROM	FEET TO
Bentonite	0	
Water		
Grout		14.5

VOLUME OF MATERIAL USED

Grout 1.5 LB
Bentonite 2 LB
Water 1.5 gal

Scott Lenth 075 MWD/MSD/MGD 5/25/18

SIGNATURE-MASTER WELL DRILLER OR SUPERVISING SANITARIAN LICENSE # CIRCLE ONE DATE

DENV 828 JULY 1997

MARYLAND DEPARTMENT OF THE ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION
1800 Washington Blvd., Baltimore, Maryland 21230 (410) 537-3784

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WATER WELL ABANDONMENT-SEALING REPORT FORM

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* WELL OWNER
* MDE, WATER MANAGEMENT ADMINISTRATION, WELL PROGRAM

DATE WELL ABANDONED: 5/24/2018 (month/day/year)

* PERMIT NUMBER OF ABANDONED WELL (if any) PVE -6 -

* PERMIT NUMBER OF REPLACEMENT WELL - -

* PERSON ABANDONING WELL: Jorge Sorto

WELL DRILLERS LICENSE NUMBER: 075
CIRCLE: MWD/MSD/MGD

* OWNER'S NAME: Gateway Owner II 46 LLC

* WELL LOCATION:
COUNTY: Howard County
NEAREST TOWN: Columbia
TAX MAP 0042 BLOCK 0006 PARCEL 0513
SUBDIVISION: 0000
SECTION: N/A LOT: P40
NEAREST ROAD: Commerce Center RD

SITE LOCATION MAP

* TYPE OF WELL BEING ABANDONED:

___ DRILLED ___ JETTED
___ BORED/AUGERED ___ HAND DUG
___ OTHER (specify) ___

* USE CODE:

___ DOMESTIC ___ MUNICIPAL/PUBLIC
___ IRRIGATION ___ INDUSTRIAL
X TEST/OBSERVATION ___ GEOTHERMAL

* TYPE OF CASING:

___ STEEL ___ PLASTIC
___ CONCRETE ___ OTHER (specify)

* SIZE OF CASING: 2 INCHES IN DIAMETER

* DEPTH OF WELL: 14.5 FEET DEEP

* WAS ANY CASING REMOVED? ___ YES X NO
if yes, length removed, in feet: ___

* WAS CASING RIPPED OR PERFORATED? ___ YES X NO

LOG OF SEALING MATERIAL

MATERIAL	FEET FROM	FEET TO
Bentonite	0	
Water		
Grout		14.5

VOLUME OF MATERIAL USED

Grout 1.5 LB
Bentonite 2 LB
Water 1.5 GAL

Scott Leyden — 075 — MWD/MSD/MGD — 5/25/18

SIGNATURE-MASTER WELL DRILLER OR SUPERVISING SANITARIAN — LICENSE # — CIRCLE ONE — DATE

DENV 828 JULY 1997

© MDE

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WATER WELL ABANDONMENT-SEALING REPORT FORM

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* WELL OWNER
* MDE, WATER MANAGEMENT ADMINISTRATION, WELL PROGRAM

DATE WELL ABANDONED: 5/24/2018 (month/day/year)

* PERMIT NUMBER OF ABANDONED WELL (if any) PVE – 5 –
* PERMIT NUMBER OF REPLACEMENT WELL – –
* PERSON ABANDONING WELL: Jorge Sotto
* OWNER'S NAME: Gateway Owner A 40 LLC

WELL DRILLERS LICENSE NUMBER: 075
CIRCLE: MWD/MSD/MGD

* WELL LOCATION:
COUNTY: Howard County
NEAREST TOWN: Columbia
TAX MAP 0042 BLOCK 0006 PARCEL 0513
SUBDIVISION: 0000
SECTION: N/A LOT: A40
NEAREST ROAD: Commerce Center RD

SITE LOCATION MAP

* TYPE OF WELL BEING ABANDONED:
  - ___ DRILLED ___ JETTED
  - ___ BORED/AUGERED ___ HAND DUG
  - ___ OTHER (specify) ___

* USE CODE:
  - ___ DOMESTIC ___ MUNICIPAL/PUBLIC
  - ___ IRRIGATION ___ INDUSTRIAL
  - ___ TEST/OBSERVATION ___ GEOTHERMAL

* TYPE OF CASING:
  - ___ STEEL ___ PLASTIC
  - ___ CONCRETE ___ OTHER (specify) ___

* SIZE OF CASING: 2 INCHES IN DIAMETER
* DEPTH OF WELL: 14.4 FEET DEEP
* WAS ANY CASING REMOVED? ___ YES ___ NO
  if yes, length removed, in feet: ___
* WAS CASING RIPPED OR PERFORATED? ___ YES ___ NO

LOG OF SEALING MATERIAL

MATERIAL	FEET FROM	FEET TO
Bentonite	0	
Water		
Grout		14.4

VOLUME OF MATERIAL USED

Grout 1.5 LB
Bentonite 2 LB
Water 1.5 gal

Scott Lenfest — 075 — MWD/MSD/MGD — 5/25/18

SIGNATURE-MASTER WELL DRILLER OR SUPERVISING SANITARIAN — LICENSE # — CIRCLE ONE — DATE

DENV 828 JULY 1997

1) MDE

MARYLAND DEPARTMENT OF THE ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION
1800 Washington Blvd., Baltimore, Maryland 21230 (410) 537-3784

WATER WELL ABANDONMENT-SEALING REPORT FORM

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* WELL OWNER
* MDE, WATER MANAGEMENT ADMINISTRATION, WELL PROGRAM

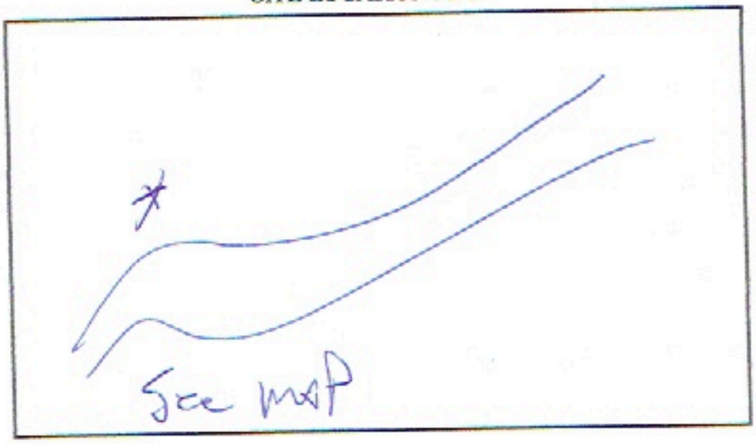
DATE WELL ABANDONED: 5/24/2018 (month/day/year)

* PERMIT NUMBER OF ABANDONED WELL (if any) QVE - 4 -
* PERMIT NUMBER OF REPLACEMENT WELL - -
* PERSON ABANDONING WELL: Jorge Sorto
* OWNER'S NAME: Gateway Owner A 40 LLC

WELL DRILLERS LICENSE NUMBER: 075
CIRCLE: MWD/MSD/(MGD)

* WELL LOCATION:
COUNTY: Howard County
NEAREST TOWN: Columbia
TAX MAP 0042 BLOCK 0006 PARCEL 0513
SUBDIVISION: 0000
SECTION: N/A LOT: A40
NEAREST ROAD: Commerce Center RD

SITE LOCATION MAP



* TYPE OF WELL BEING ABANDONED:
  - ✓ DRILLED
  - ___ JETTED
  - ___ BORED/AUGERED
  - ___ HAND DUG
  - ___ OTHER (specify) ___

* USE CODE:
  - ___ DOMESTIC
  - ___ MUNICIPAL/PUBLIC
  - ___ IRRIGATION
  - ___ INDUSTRIAL
  - ✓ TEST/OBSERVATION
  - ___ GEOTHERMAL

* TYPE OF CASING:
  - ___ STEEL
  - ✓ PLASTIC
  - ___ CONCRETE
  - ___ OTHER (specify) ___

* SIZE OF CASING: 2 INCHES IN DIAMETER
* DEPTH OF WELL: 14.4 FEET DEEP
* WAS ANY CASING REMOVED? ___ YES ✓ NO
  if yes, length removed, in feet: ___
* WAS CASING RIPPED OR PERFORATED? ___ YES ✓ NO

LOG OF SEALING MATERIAL

MATERIAL	FEET FROM	FEET TO
Bentonite Water Grout	0	14.4

VOLUME OF MATERIAL USED

Grout 1 LB
Bentonite 2 LB
Water 1.5 gal

[signature] 075 MWD/MSD/(MGD) 5/25/18
SIGNATURE-MASTER WELL DRILLER OR SUPERVISING SANITARIAN | LICENSE # | CIRCLE ONE | DATE

DENV 828 JULY 1997

1) MDE

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* MDE, WATER MANAGEMENT ADMINISTRATION, WELL PROGRAM

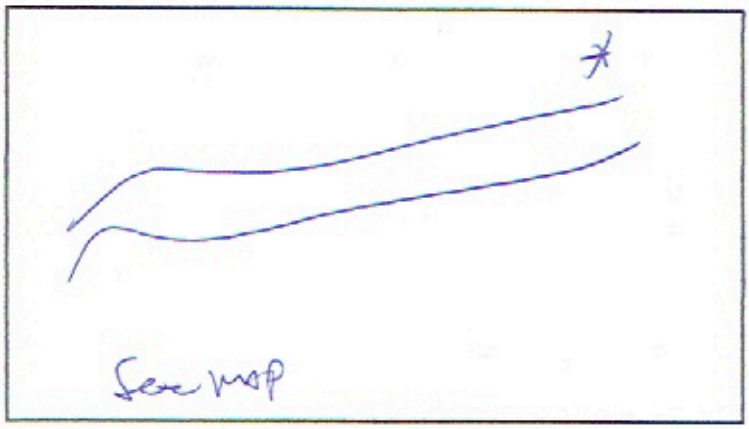
DATE WELL ABANDONED: 5/24/2018 (month/day/year)

* PERMIT NUMBER OF ABANDONED WELL (if any): PVE – 3 –
* PERMIT NUMBER OF REPLACEMENT WELL: – –
* PERSON ABANDONING WELL: Jorge Sorto
* OWNER'S NAME: Gateway Owner II 40 LLC

WELL DRILLERS LICENSE NUMBER: 075
CIRCLE: MWD/MSD/MGD

* WELL LOCATION:
COUNTY: Howard County
NEAREST TOWN: Columbia
TAX MAP 0042 BLOCK 0006 PARCEL 0513
SUBDIVISION: 0000
SECTION: N/A LOT: 940
NEAREST ROAD: Commerce Center RD

SITE LOCATION MAP



* TYPE OF WELL BEING ABANDONED:

___ DRILLED ___ JETTED
___ BORED/AUGERED ___ HAND DUG
___ OTHER (specify) ___

* USE CODE:

___ DOMESTIC ___ MUNICIPAL/PUBLIC
___ IRRIGATION ___ INDUSTRIAL
___ TEST/OBSERVATION ___ GEOTHERMAL

* TYPE OF CASING:

___ STEEL ___ PLASTIC
___ CONCRETE ___ OTHER (specify)

* SIZE OF CASING: 2 INCHES IN DIAMETER
* DEPTH OF WELL: 14.3 FEET DEEP
* WAS ANY CASING REMOVED? ___ YES ___ NO
if yes, length removed, in feet: ___
* WAS CASING RIPPED OR PERFORATED? ___ YES ___ NO

LOG OF SEALING MATERIAL

MATERIAL	FEET FROM	FEET TO
Bentonite	0	
Water		
Grout		14.3

VOLUME OF MATERIAL USED

Grout 1CB
Bentonite 2LB
Water 1.5gal

Scott Leyton — 075 — MWD/MSD/MGD — 5/25/18

SIGNATURE MASTER WELL DRILLER OR SUPERVISING SANITARIAN — LICENSE # — CIRCLE ONE — DATE

DENV 828 JULY 1997

MARYLAND DEPARTMENT OF THE ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION
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* WELL OWNER
* MDE, WATER MANAGEMENT ADMINISTRATION, WELL PROGRAM

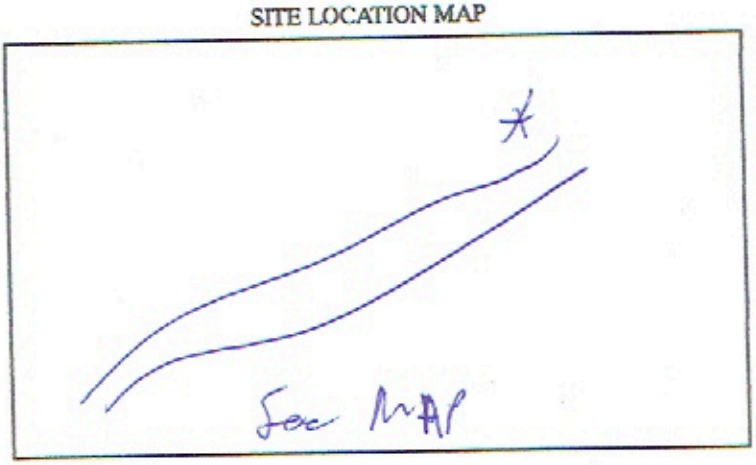
DATE WELL ABANDONED: 5/24/2018 (month/day/year)

* PERMIT NUMBER OF ABANDONED WELL (if any) PVE – 2 –
* PERMIT NUMBER OF REPLACEMENT WELL – –
* PERSON ABANDONING WELL: Jorge Sorto
* OWNER'S NAME: Gateway Owner A 40 LLC

WELL DRILLERS LICENSE NUMBER: 075
CIRCLE: MWD/MSD/MGD

* WELL LOCATION:
COUNTY: Howard County
NEAREST TOWN: Columbia
TAX MAP 0042 BLOCK 0006 PARCEL 0513
SUBDIVISION: 0000
SECTION: N/A LOT: A40
NEAREST ROAD: Commerce Center RD

SITE LOCATION MAP



* TYPE OF WELL BEING ABANDONED:

_____ DRILLED _____ JETTED
_____ BORED/AUGERED _____ HAND DUG
_____ OTHER (specify) _____

* USE CODE:

_____ DOMESTIC _____ MUNICIPAL/PUBLIC
_____ IRRIGATION _____ INDUSTRIAL
_____ TEST/OBSERVATION _____ GEOTHERMAL

* TYPE OF CASING:

_____ STEEL _____ PLASTIC
_____ CONCRETE _____ OTHER (specify)

* SIZE OF CASING: 2 INCHES IN DIAMETER
* DEPTH OF WELL: 14.5 FEET DEEP
* WAS ANY CASING REMOVED? ___ YES ___ NO
if yes, length removed, in feet: _____
* WAS CASING RIPPED OR PERFORATED? ___ YES ___ NO

LOG OF SEALING MATERIAL

MATERIAL	FEET FROM	FEET TO
Bentonite	0	
Water		
Grout		14.5

VOLUME OF MATERIAL USED

Grout 1LB
Bentonite 2LB
Water 1.5 gal

Scott Lenfest — 075 — MWD/MSD/MGD — 5/25/18

SIGNATURE-MASTER WELL DRILLER OR SUPERVISING SANITARIAN — LICENSE # — CIRCLE ONE — DATE

DENV 828 JULY 1997

MDE

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WATER WELL ABANDONMENT-SEALING REPORT FORM

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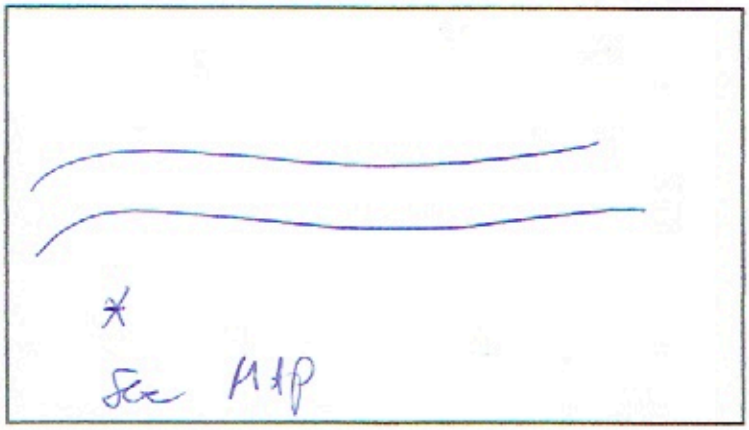
* WELL OWNER
* MDE. WATER MANAGEMENT ADMINISTRATION. WELL PROGRAM

DATE WELL ABANDONED: 5/24/2018 (month/day/year)

* PERMIT NUMBER OF ABANDONED WELL (if any): PVE – 1 –
* PERMIT NUMBER OF REPLACEMENT WELL: – –
* PERSON ABANDONING WELL: Jorge Soto
* WELL DRILLERS LICENSE NUMBER: 075
  CIRCLE: MWD/MSD/MGD
* OWNER'S NAME: Gateway Owner A 40 LLC
* WELL LOCATION:
  COUNTY: Howard County
  NEAREST TOWN: Columbia
  TAX MAP 0042 BLOCK 0006 PARCEL 0513
  SUBDIVISION: 0000
  SECTION: N/A LOT: A40
  NEAREST ROAD: Commerce Center RD

SITE LOCATION MAP



* TYPE OF WELL BEING ABANDONED:
  - (1) DRILLED
  - ( ) JETTED
  - ( ) BORED/AUGERED
  - ( ) HAND DUG
  - ( ) OTHER (specify)

* USE CODE:
  - ( ) DOMESTIC
  - ( ) MUNICIPAL/PUBLIC
  - ( ) IRRIGATION
  - ( ) INDUSTRIAL
  - (1) TEST/OBSERVATION
  - ( ) GEOTHERMAL

* TYPE OF CASING:
  - ( ) STEEL
  - ( ) PLASTIC
  - ( ) CONCRETE
  - ( ) OTHER (specify)

* SIZE OF CASING: 2 INCHES IN DIAMETER
* DEPTH OF WELL: 14.3 FEET DEEP
* WAS ANY CASING REMOVED? ___ YES (✓) NO
  if yes, length removed, in feet: ___
* WAS CASING RIPPED OR PERFORATED? ___ YES (✓) NO

LOG OF SEALING MATERIAL

MATERIAL	FEET FROM	FEET TO
Bentonite	0	
Water		
Grout		14.3

VOLUME OF MATERIAL USED

Grout 1 LB
Bentonite 1.2 LB
Water 2 gal

Jorge Soto — 075 — MWD/MSD/MGD — 5/25/18

SIGNATURE-MASTER WELL DRILLER OR SUPERVISING SANITARIAN — LICENSE # — CIRCLE ONE — DATE

DENV 828 JULY 1997

D MDE

MARYLAND DEPARTMENT OF THE ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION
1800 Washington Blvd., Baltimore, Maryland 21230 (410) 537-3784

****

WATER WELL ABANDONMENT - SEALING REPORT FORM

****

SUBMIT COPIES OF COMPLETED FORM TO:

* COUNTY ENVIRONMENT AGENCY (contact MDE, WMA if address needed)
* WELL OWNER
* MDE, WATER MANAGEMENT ADMINISTRATION, WELL PROGRAM

DATE WELL ABANDONED: 5/24/2018 (month/day/year)

* PERMIT NUMBER OF ABANDONED WELL (if any) TUB -D- — —
* PERMIT NUMBER OF REPLACEMENT WELL — —
* PERSON ABANDONING WELL: Jorge Soto
* OWNER'S NAME: Gateway Owner A 40 LLC

WELL DRILLERS LICENSE NUMBER: 075
CIRCLE: MWD/MSD/MGD

* WELL LOCATION:
COUNTY: Howard County
NEAREST TOWN: Columbia
TAX MAP 0042 BLOCK 0006 PARCEL 0513
SUBDIVISION: 0000
SECTION: N/A LOT: A40
NEAREST ROAD: Commerce Center RD

SITE LOCATION MAP

* TYPE OF WELL BEING ABANDONED:

___ DRILLED ___ JETTED
___ BORED/AUGERED ___ HAND DUG
___ OTHER (specify) ___

* USE CODE:

___ DOMESTIC ___ MUNICIPAL/PUBLIC
___ IRRIGATION ___ INDUSTRIAL
✓ TEST/OBSERVATION ___ GEOTHERMAL

* TYPE OF CASING:

___ STEEL ✓ PLASTIC
___ CONCRETE ___ OTHER (specify)

* SIZE OF CASING: 4 INCHES IN DIAMETER
* DEPTH OF WELL: 27 FEET DEEP
* WAS ANY CASING REMOVED? ___ YES ✓ NO
if yes, length removed, in feet: ___
* WAS CASING RIPPED OR PERFORATED? ___ YES ✓ NO

LOG OF SEALING MATERIAL

MATERIAL	FEET FROM	FEET TO
Bentonite	0	
Water		
Grout		27

VOLUME OF MATERIAL USED
Grout 1.5 LB
Bentonite 1.2 LB
Water 2gal

Scott Longfellow — 075 — MWD/MSD/MGD — 5/25/18
SIGNATURE-MASTER WELL DRILLER OR SUPERVISING SANITARIAN — LICENSE # — CIRCLE ONE — DATE

DENV 828 JULY 1997

MARYLAND DEPARTMENT OF THE ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION
1800 Washington Blvd., Baltimore, Maryland 21230 (410) 537-3784

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WATER WELL ABANDONMENT-SEALING REPORT FORM

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* MDE, WATER MANAGEMENT ADMINISTRATION, WELL PROGRAM

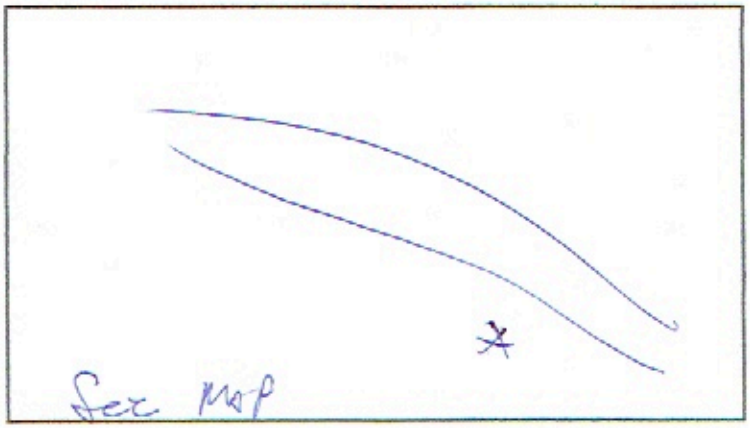
DATE WELL ABANDONED: 5/24/2018 (month/day/year)

* PERMIT NUMBER OF ABANDONED WELL (if any) TVE -15-
* PERMIT NUMBER OF REPLACEMENT WELL
* PERSON ABANDONING WELL: Jorge Sorto
* OWNER'S NAME: Gateway Owner A 40 LLC

WELL DRILLERS LICENSE NUMBER: 075
CIRCLE: MWD/MSD/MGD

* WELL LOCATION:
COUNTY: Howard County
NEAREST TOWN: Columbia
TAX MAP 0042 BLOCK 0006 PARCEL 0513
SUBDIVISION: 0000
SECTION: N/A LOT: A40
NEAREST ROAD: Commerce Center RD

SITE LOCATION MAP



* TYPE OF WELL BEING ABANDONED:

___ DRILLED ___ JETTED
___ BORED/AUGERED ___ HAND DUG
___ OTHER (specify) ___

* USE CODE:

___ DOMESTIC ___ MUNICIPAL/PUBLIC
___ IRRIGATION ___ INDUSTRIAL
X TEST/OBSERVATION ___ GEOTHERMAL

* TYPE OF CASING:

___ STEEL X PLASTIC
___ CONCRETE ___ OTHER (specify)

* SIZE OF CASING: 4 INCHES IN DIAMETER
* DEPTH OF WELL: 12 FEET DEEP
* WAS ANY CASING REMOVED? ___ YES X NO
if yes, length removed, in feet: ___
* WAS CASING RIPPED OR PERFORATED? ___ YES X NO

LOG OF SEALING MATERIAL

MATERIAL	FEET FROM	FEET TO
Bentonite	0	
Water		
Grout		12

VOLUME OF MATERIAL USED

Grout 1.5 LB
Bentonite 1.2 LB
Water 2 gal

Scott Leyton 075 MWD/MSD/MGD 5/25/18
SIGNATURE-MASTER WELL DRILLER OR SUPERVISING SANITARIAN LICENSE # CIRCLE ONE DATE

DENV 828 JULY 1997

MARYLAND DEPARTMENT OF THE ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION
1800 Washington Blvd., Baltimore, Maryland 21230 (410) 537-3784

****

WATER WELL ABANDONMENT-SEALING REPORT FORM

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* WELL OWNER
* MDE, WATER MANAGEMENT ADMINISTRATION, WELL PROGRAM

DATE WELL ABANDONED: 5/24/2018 (month/day/year)

* PERMIT NUMBER OF ABANDONED WELL (if any): TBAI - 1 -
* PERMIT NUMBER OF REPLACEMENT WELL: - -
* PERSON ABANDONING WELL: Jorge Sorto
* OWNER'S NAME: Gateway Owner A 40 LLC

WELL DRILLERS LICENSE NUMBER: 075
CIRCLE: MWD/MSD/MGD

* WELL LOCATION:
COUNTY: Howard County
NEAREST TOWN: Columbia
TAX MAP 0042 BLOCK 0006 PARCEL 0513
SUBDIVISION: 0000
SECTION: N/A LOT: A40
NEAREST ROAD: Commerce Center Rd

SITE LOCATION MAP

* TYPE OF WELL BEING ABANDONED:

___ DRILLED ___ JETTED
___ BORED/AUGERED ___ HAND DUG
___ OTHER (specify) ___

* USE CODE:

___ DOMESTIC ___ MUNICIPAL/PUBLIC
___ IRRIGATION ___ INDUSTRIAL
___ TEST/OBSERVATION ___ GEOTHERMAL

* TYPE OF CASING:

___ STEEL ___ PLASTIC
___ CONCRETE ___ OTHER (specify)

* SIZE OF CASING: 2 INCHES IN DIAMETER
* DEPTH OF WELL: 30 FEET DEEP
* WAS ANY CASING REMOVED? ___ YES ___ NO
if yes, length removed, in feet: ___
* WAS CASING RIPPED OR PERFORATED? ___ YES ___ NO

LOG OF SEALING MATERIAL

MATERIAL	FEET FROM	FEET TO
Bentonite	0	
Water		
Grout		30

VOLUME OF MATERIAL USED
Grout 1.5 LB
Bentonite 1 LB
Water 2.5 gal

Scott Lenfest 075 MWD/MSD/MGD 5/25/18
SIGNATURE-MASTER WELL DRILLER OR SUPERVISING SANITARIAN LICENSE # CIRCLE ONE DATE

DENV 828 JULY 1997

MARYLAND DEPARTMENT OF THE ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION
1800 Washington Blvd., Baltimore, Maryland 21230 (410) 537-3784

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WATER WELL ABANDONMENT-SEALING REPORT FORM

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* COUNTY ENVIRONMENT AGENCY (contact MDE, WMA if address needed)
* WELL OWNER
* MDE, WATER MANAGEMENT ADMINISTRATION, WELL PROGRAM

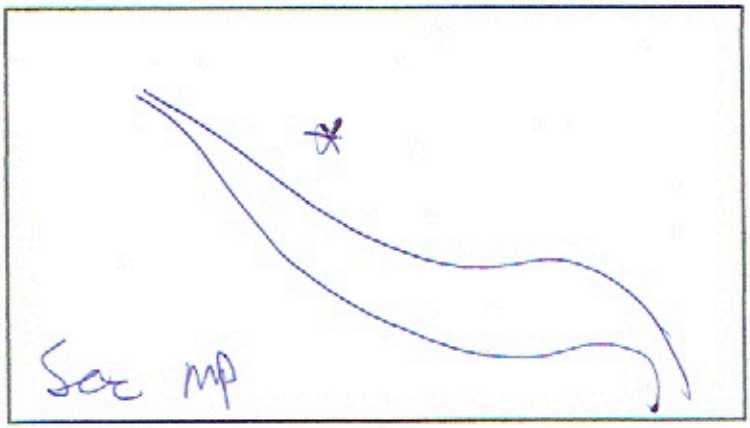
DATE WELL ABANDONED: 5/24/2018 (month/day/year)

* PERMIT NUMBER OF ABANDONED WELL (if any) TPAI – 3 –
* PERMIT NUMBER OF REPLACEMENT WELL
* PERSON ABANDONING WELL: Jorge Sorto
* OWNER'S NAME: Gateway Owner II 40 LLC

WELL DRILLERS LICENSE NUMBER: 075
CIRCLE: MWD/MSD/MGD

* WELL LOCATION:
COUNTY: Howard County
NEAREST TOWN: Columbia
TAX MAP 0042 BLOCK 0006 PARCEL 0513
SUBDIVISION: 0000
SECTION: N/A LOT: P40
NEAREST ROAD: Commerce Center Rd

SITE LOCATION MAP



* TYPE OF WELL BEING ABANDONED:

___ DRILLED ___ JETTED
___ BORED/AUGERED ___ HAND DUG
___ OTHER (specify) ___

* USE CODE:

___ DOMESTIC ___ MUNICIPAL/PUBLIC
___ IRRIGATION ___ INDUSTRIAL
X TEST/OBSERVATION ___ GEOTHERMAL

* TYPE OF CASING:

___ STEEL X PLASTIC
___ CONCRETE ___ OTHER (specify)

* SIZE OF CASING: 2 INCHES IN DIAMETER
* DEPTH OF WELL: 24 FEET DEEP
* WAS ANY CASING REMOVED? ___ YES X NO
if yes, length removed, in feet: ___
* WAS CASING RIPPED OR PERFORATED? ___ YES X NO

LOG OF SEALING MATERIAL

MATERIAL	FEET FROM	FEET TO
Bentonite	0	
Water		
Grout		24

VOLUME OF MATERIAL USED
Grout 1 LB
Bentonite 1 LB
Water 2 GAL

Scott Leyton 075 MWD/MSD/MGD 5/25/18
SIGNATURE-MASTER WELL DRILLER OR SUPERVISING SANITARIAN LICENSE # CIRCLE ONE DATE

DENV 828 JULY 1997

MARYLAND DEPARTMENT OF THE ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION
1800 Washington Blvd., Baltimore, Maryland 21230 (410) 537-3784

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WATER WELL ABANDONMENT-SEALING REPORT FORM

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* COUNTY ENVIRONMENT AGENCY (contact MDE, WMA if address needed)
* WELL OWNER
* MDE, WATER MANAGEMENT ADMINISTRATION, WELL PROGRAM

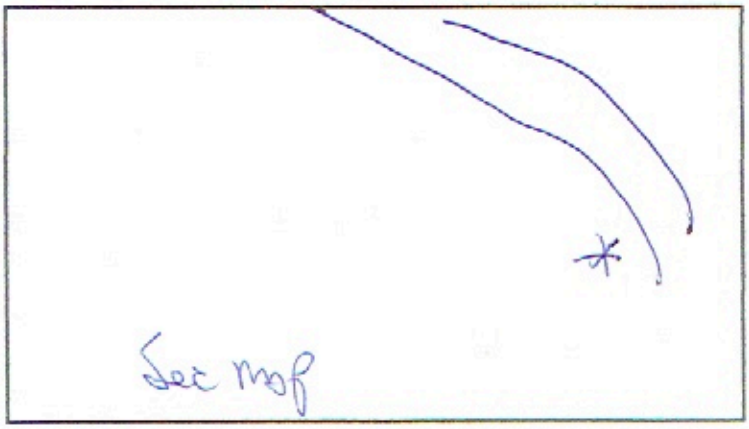
DATE WELL ABANDONED: 5/24/2018 (month/day/year)

* PERMIT NUMBER OF ABANDONED WELL (if any) TBA1 – 5 –
* PERMIT NUMBER OF REPLACEMENT WELL – –
* PERSON ABANDONING WELL: Jorge Sotto
* OWNER'S NAME: Gateway Owner A 40 LLC

WELL DRILLERS LICENSE NUMBER: 075
CIRCLE: MWD/MSD/MGD

* WELL LOCATION:
COUNTY: Howard County
NEAREST TOWN: Columbia
TAX MAP 0042 BLOCK 0006 PARCEL 0513
SUBDIVISION: 0000
SECTION: N/A LOT: A40
NEAREST ROAD: Commerce Center RD

SITE LOCATION MAP



* TYPE OF WELL BEING ABANDONED:

__✓__ DRILLED _____ JETTED
_____ BORED/AUGERED _____ HAND DUG
_____ OTHER (specify) _____

* USE CODE:

_____ DOMESTIC _____ MUNICIPAL/PUBLIC
_____ IRRIGATION _____ INDUSTRIAL
__✓__ TEST/OBSERVATION _____ GEOTHERMAL

* TYPE OF CASING:

_____ STEEL _____ PLASTIC
_____ CONCRETE _____ OTHER (specify)

* SIZE OF CASING: 2 INCHES IN DIAMETER
* DEPTH OF WELL: 24 FEET DEEP
* WAS ANY CASING REMOVED? ___ YES __✓__ NO
if yes, length removed, in feet: _____
* WAS CASING RIPPED OR PERFORATED? ___ YES __✓__ NO

LOG OF SEALING MATERIAL

MATERIAL	FEET FROM	FEET TO
Bentonite	0	
Water		
Grout		24

VOLUME OF MATERIAL USED
Grout 1lb
Bentonite 1Lb
Water 2gal

Scott Leyton — 075 — MWD/MSD/MGD — 5/25/18
SIGNATURE-MASTER WELL DRILLER OR SUPERVISING SANITARIAN — LICENSE # — CIRCLE ONE — DATE

DENV 828 JULY 1997

MARYLAND DEPARTMENT OF THE ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION
1800 Washington Blvd., Baltimore, Maryland 21230 (410) 537-3784

WATER WELL ABANDONMENT-SEALING REPORT FORM

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* WELL OWNER
* MDE, WATER MANAGEMENT ADMINISTRATION, WELL PROGRAM

DATE WELL ABANDONED: 5/24/2018 (month/day/year)

* PERMIT NUMBER OF ABANDONED WELL (if any) TPAI - 4 -
* PERMIT NUMBER OF REPLACEMENT WELL - -
* PERSON ABANDONING WELL: Jorge Sorto
* OWNER'S NAME: Gateway Owner A 40 LLC

WELL DRILLERS LICENSE NUMBER: 075
CIRCLE: MWD/MSD/(MGD)

* WELL LOCATION:
  COUNTY: Howard County
  NEAREST TOWN: Columbia
  TAX MAP 0042 BLOCK 0006 PARCEL 0513
  SUBDIVISION: 0000
  SECTION: N/A LOT: A40
  NEAREST ROAD: Commerce Center RD

SITE LOCATION MAP

* TYPE OF WELL BEING ABANDONED:
  ✓ DRILLED ____ JETTED
  ____ BORED/AUGERED ____ HAND DUG
  ____ OTHER (specify) ____

* USE CODE:
  ____ DOMESTIC ____ MUNICIPAL/PUBLIC
  ____ IRRIGATION ____ INDUSTRIAL
  ✓ TEST/OBSERVATION ____ GEOTHERMAL

* TYPE OF CASING:
  ____ STEEL ✓ PLASTIC
  ____ CONCRETE ____ OTHER (specify) ____

* SIZE OF CASING: 2 INCHES IN DIAMETER
* DEPTH OF WELL: 22 FEET DEEP
* WAS ANY CASING REMOVED? ____ YES ✓ NO
  if yes, length removed, in feet: ____
* WAS CASING RIPPED OR PERFORATED? ____ YES ✓ NO

LOG OF SEALING MATERIAL

MATERIAL	FEET	
	FROM	TO
Bentonite Water Grout	0	22

VOLUME OF MATERIAL USED
Grout 1lb Bentonite 1lb Water 2gal

Scott Lengthf 075 MWD/MSD/(MGD) 5/25/18
SIGNATURE-MASTER WELL DRILLER OR SUPERVISING SANITARIAN LICENSE # CIRCLE ONE DATE

DENV 828 JULY 1997

1) MDE

MARYLAND DEPARTMENT OF THE ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION
1800 Washington Blvd., Baltimore, Maryland 21230 (410) 537-3784

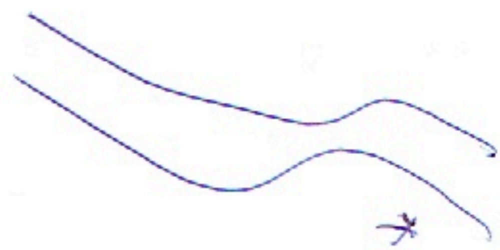
WATER WELL ABANDONMENT-SEALING REPORT FORM

SUBMIT COPIES OF COMPLETED FORM TO:
* COUNTY ENVIRONMENT AGENCY (contact MDE, WMA if address needed)
* WELL OWNER
* MDE, WATER MANAGEMENT ADMINISTRATION, WELL PROGRAM

DATE WELL ABANDONED: 5/24/2018 (month/day/year)

* PERMIT NUMBER OF ABANDONED WELL (if any) TUE - 11 - S
* PERMIT NUMBER OF REPLACEMENT WELL - -
* PERSON ABANDONING WELL: Jorge Sorto
* WELL DRILLERS LICENSE NUMBER: 075 CIRCLE: MWD/MSD/(MGD)
* OWNER'S NAME: Gateway Owner A 40 LLC
* WELL LOCATION:
  COUNTY: Howard County
  NEAREST TOWN: Columbia
  TAX MAP 0042 BLOCK 0006 PARCEL 0513
  SUBDIVISION: 0000
  SECTION: N/A LOT: A40
  NEAREST ROAD: Commerce Center RD

SITE LOCATION MAP



See map

* TYPE OF WELL BEING ABANDONED:
  - ✓ DRILLED
  - ____ JETTED
  - ____ BORED/AUGERED
  - ____ HAND DUG
  - ____ OTHER (specify) ____

* USE CODE:
  - ____ DOMESTIC
  - ____ MUNICIPAL/PUBLIC
  - ____ IRRIGATION
  - ____ INDUSTRIAL
  - ✓ TEST/OBSERVATION
  - ____ GEOTHERMAL

* TYPE OF CASING:
  - ____ STEEL
  - ✓ PLASTIC
  - ____ CONCRETE
  - ____ OTHER (specify) ____

LOG OF SEALING MATERIAL

MATERIAL	FEET FROM	FEET TO
Bentonite Water Grout	0	14

VOLUME OF MATERIAL USED
Grout 2 lb
Bentonite 1 lb
Water 4 gal

* SIZE OF CASING: 4 INCHES IN DIAMETER
* DEPTH OF WELL: 14 FEET DEEP
* WAS ANY CASING REMOVED? ____ YES ✓ NO
  if yes, length removed, in feet: ____
* WAS CASING RIPPED OR PERFORATED? ____ YES ✓ NO

Scott [signature] 075 MWD/MSD/(MGD) 5/25/18

SIGNATURE-MASTER WELL DRILLER OR SUPERVISING SANITARIAN | LICENSE # | CIRCLE ONE | DATE

DENV 828 JULY 1997

MARYLAND DEPARTMENT OF THE ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION
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WATER WELL ABANDONMENT-SEALING REPORT FORM

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* WELL OWNER
* MDE, WATER MANAGEMENT ADMINISTRATION, WELL PROGRAM

DATE WELL ABANDONED: 5/24/2018 (month/day/year)

* PERMIT NUMBER OF ABANDONED WELL (if any) TUE - 11 - D
* PERMIT NUMBER OF REPLACEMENT WELL - -
* PERSON ABANDONING WELL: Jorge Sorto
* OWNER'S NAME: Gateway Owner A 40 LLC

WELL DRILLERS LICENSE NUMBER: 075
CIRCLE: MWD/MSD/MGD (MGD circled)

* WELL LOCATION:
  COUNTY: Howard County
  NEAREST TOWN: Columbia
  TAX MAP 0042 BLOCK 0006 PARCEL 0513
  SUBDIVISION: 0000
  SECTION: N/A LOT: 840
  NEAREST ROAD: Commerce Center RD

SITE LOCATION MAP

* TYPE OF WELL BEING ABANDONED:

  ✓ DRILLED ____ JETTED
  ____ BORED/AUGERED ____ HAND DUG
  ____ OTHER (specify) ____

* USE CODE:

  ____ DOMESTIC ____ MUNICIPAL/PUBLIC
  ____ IRRIGATION ____ INDUSTRIAL
  ✓ TEST/OBSERVATION ____ GEOTHERMAL

* TYPE OF CASING:

  ____ STEEL ✓ PLASTIC
  ____ CONCRETE ____ OTHER (specify)

* SIZE OF CASING: 4 INCHES IN DIAMETER
* DEPTH OF WELL: 26 FEET DEEP
* WAS ANY CASING REMOVED? ____ YES ✓ NO
  if yes, length removed, in feet: ____
* WAS CASING RIPPED OR PERFORATED? ____ YES ✓ NO

LOG OF SEALING MATERIAL

MATERIAL	FEET	
	FROM	TO
Bentonite Water Grout	0	26

VOLUME OF MATERIAL USED

Grout 2 lb
Bentonite 11 lb
water 4 gal

Scott Lengfelt
SIGNATURE-MASTER WELL DRILLER OR SUPERVISING SANITARIAN

075
LICENSE #

MWD/MSD/MGD (MGD circled)
CIRCLE ONE

5/25/18
DATE

DENV 828 JULY 1997

ATTACHMENT 4

To Semi-Annual Project Progress Report
RCRA Corrective Action Permit
No. MDD046279311

General Electric Co.
Former Appliance Park East Facility
Columbia, MD

Period January 1, 2018 to June 30, 2018

Findings Summary for
Warehouse Building Oil/Water Separator and
Acid Neutralization Units
RFI Unit 6

2204275051A.DWG

FIGURE 1
GROUNDWATER ELEVATION CONTOUR MAP
NOVEMBER 17, 2017
RFI UNIT #6
GE - FORMER APPLIANCE PARK EAST
COLUMBIA, MARYLAND

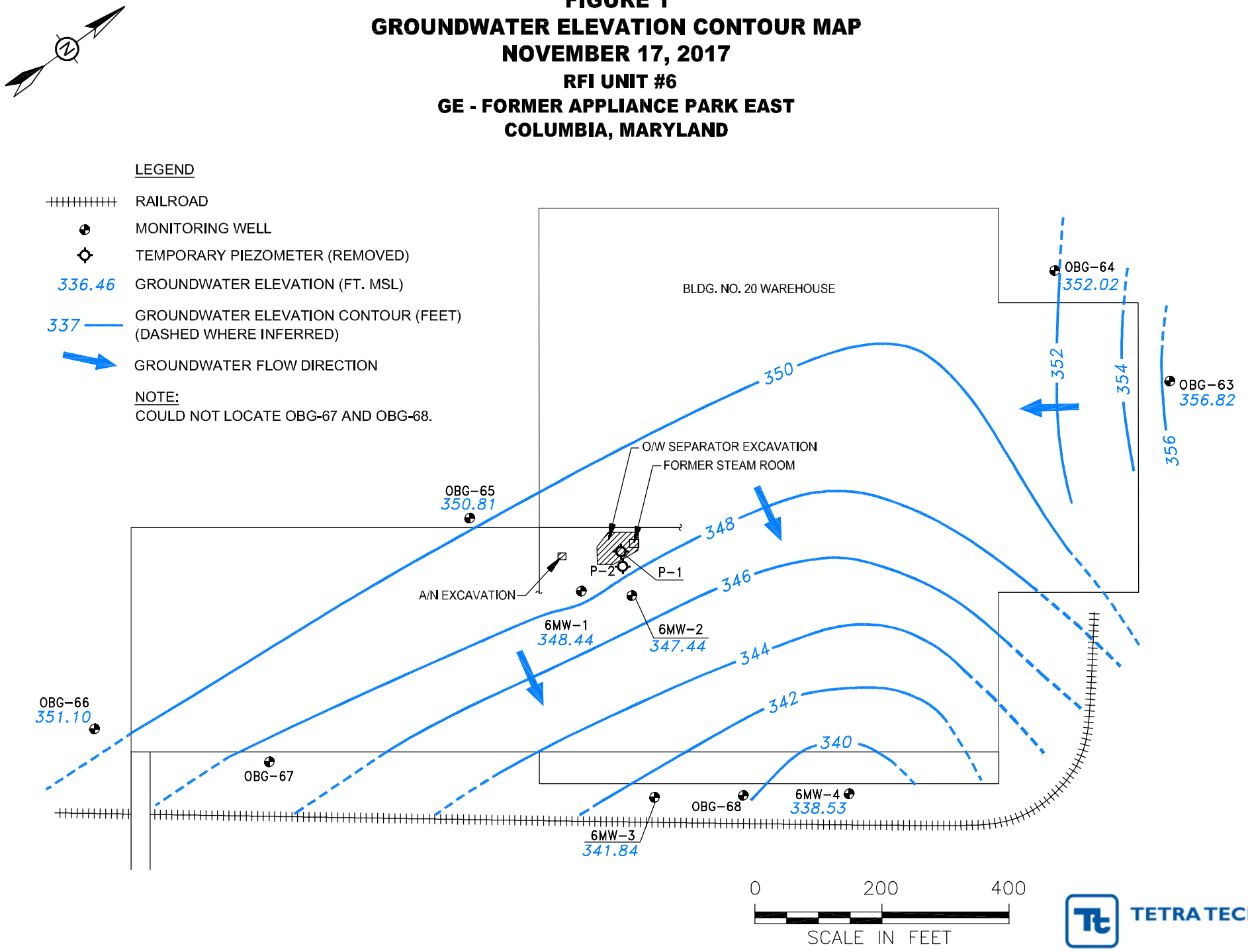

Table 1 Summary of Ground Water Elevations
RFI Unit 6
Former Appliance Park East, Columbia, Maryland

Date		17-Oct-94*		17-Jan-95*		18-Apr-95*		18-Jul-95*		16-May-02		14-Nov-07		29-Nov-12		17-Nov-17	
Well ID	Reference Elevation Feet, MSL	Depth to Water	Ground Water Elevation Feet, MSL	Depth to Water	Ground Water Elevation Feet, MSL	Depth to Water	Ground Water Elevation Feet, MSL	Depth to Water	Ground Water Elevation Feet, MSL	Depth to Water	Ground Water Elevation Feet, MSL	Depth to Water	Ground Water Elevation Feet, MSL	Depth to Water	Ground Water Elevation Feet, MSL	Depth to Water	Ground Water Elevation Feet, MSL
6MW-1	359.70	10.99	348.71	11.41	348.29	11.37	348.33	11.05	348.65	12.69	347.01	12.08	347.62	11.53	348.17	11.26	348.44
6MW-2	359.49	11.58	347.91	12.04	347.45	11.93	347.56	11.55	347.94	13.42	346.07	12.68	346.81	12.30	347.19	12.05	347.44
6MW-3	355.21	11.91	343.30	12.00	343.21	12.17	343.04	11.77	343.44	17.14	338.07	14.76	340.45	13.84	341.37	13.37	341.84
6MW-4	355.17	10.81	344.36	10.52	344.65	NM	--	10.59	344.58	15.83	339.34	16.55	338.62	16.86	338.31	16.64	338.53
OBG-63	361.58	9.61	351.97	8.33	353.25	9.22	352.36	9.35	352.23	5.60	355.98	5.61	355.97	4.86	356.72	4.76	356.82
OBG-64	362.40	11.33	351.07	10.52	351.88	11.01	351.39	11.00	351.40	11.51	350.89	11.99	350.41	11.35	351.05	10.38	352.02
OBG-65	362.61	11.97	350.64	11.83	350.78	12.30	350.31	12.12	350.49	13.33	349.28	13.41	349.20	12.50	350.11	11.80	350.81
OBG-66	361.99	11.81	350.18	12.57	349.42	12.42	349.57	11.95	350.04	13.54	348.45	13.37	348.62	11.59	350.40	10.89	351.10
OBG-67	355.05	5.44	349.61	5.55	349.50	5.38	349.67	4.36	350.69	6.69	348.36	NM	--	NM	--	NM	--
OBG-68	355.54	12.05	343.49	12.27	343.27	12.50	343.04	11.93	343.61	NM	--	NM	--	NM	--	NM	--

Notes:
* - Data presented in *Addendum to the RCRA Facility Investigation Report for RFI Unit 6,* dated 2 August 1995
Reference elevation for all wells is top of PVC casing
MSL - Mean Sea Level
NM - Not measured, well was inaccessible

Table 2 Detected Analytes for Ground Water Samples
RFI Unit 6
Former Appliance Park East, Columbia, Maryland

Sample Number			6-MW-1					6-MW-2					6-MW-3					OBG-65				
Sample Collection Date			8/22/94*	05/16/02	11/14/07	11/29/12	11/17/17	8/23/94*	05/16/02	11/14/07	11/29/12	11/17/17	8/23/94*	05/16/02	11/14/07	11/29/12	11/17/17	8/22/94*	05/16/02	11/14/07	11/29/12	11/17/17
Analyte	**HBN**	**PQL**																				
Field Parameters																						
pH (standard units)	--	--	6.9	6.4	5.9	6.3	6.4	6.3	6.2	6.7	6.0	6.1	6	6.6	6.8	6.7	6.8	6.2	6.4	6.2	6.0	6.0
Conductivity (mS/cm)	--	--	NA	0.169	0.238	0.116	0.147	NA	0.203	0.660	0.079	0.083	NA	0.771	0.616	0.298	0.321	NA	0.213	0.315	0.090	0.120
Temperature (^{0}C)	--	--	NA	19.8	17.4	19.1	20.0	NA	19.7	16.5	19.5	19.9	NA	16.7	16.6	17.7	17.8	NA	15.9	15.7	16.1	15.1
D.O. (mg/L)	--	--	NA	2.83	NA	NA	NA	NA	0.84	NA	NA	NA	NA	2.21	NA	NA	NA	NA	4.63	NA	NA	NA
Permit List 4 Volatiles (µg/L)																						
1,1-Dichloroethene	7	5	--	< 5	< 5	< 5	< 1	--	30	56	85	99.2	--	< 5	< 5	< 5	< 1	--	< 5	< 5	< 5	< 1
cis-1,2-Dichloroethene	--	5	NA	< 5	< 5	< 5	< 1	NA	82	89	97	65.6	NA	< 5	< 5	< 5	< 1	NA	< 5	< 5	< 5	< 1
1,2-Dichloroethene (total)	100	5	--	NA	NA	NA	NA	11	NA	NA	NA	NA	--	NA	NA	NA	NA	--	NA	NA	NA	NA
Trichloroethene	5	5	--	< 5	< 5	< 5	< 1	24	110	130	170	170	--	< 5	< 5	< 5	< 1	--	< 5	< 5	< 5	< 1
Benzene	5	5	--	< 5	< 5	< 5	< 1	2 J	< 5	< 5	< 5	< 1	--	< 5	< 5	< 5	< 1	--	< 5	< 5	< 5	< 1
Tetrachloroethene	5	5	--	< 5	< 5	< 5	< 1	--	6	18	44	75.9	--	< 5	< 5	< 5	< 1	--	< 5	< 5	< 5	< 1
Inorganic Parameters (µg/L)																						
Antimony	10	30	--	< 5	NA	NA	NA	--	< 5	NA	NA	NA	--	< 5	NA	NA	NA	--	< 5	NA	NA	NA
Chromium	100	10	2.2 J	< 3	NA	NA	NA	0.44 J	< 3	NA	NA	NA	--	< 3	NA	NA	NA	--	< 3	NA	NA	NA

Notes:
mg/L - milligrams per liter
µg/L - micrograms per liter
HBN - Health Based Number
PQL - Practical Quantitation Limit
* - Data presented in *RCRA Facility Investigation Report for RFI Unit 6,* dated 3 March 1995
< 5 or < 1 - Analyte not detected, value indicates detection limit
-- - Not detected.
NA - Not analyzed
J - Analyte present, result may not be accurate or precise
B - Not detected substantially above the level reported in laboratory or field blanks
d - Sample is a duplicate of 6-MW-2

Table 2 (cont.) Detected Analytes for Ground Water Samples
RFI Unit 6
Former Appliance Park East, Columbia, Maryland

	Sample Number		6-MW-4		OBG-67	OBG-68	6-MW-100[d]	6-MW-20[d]	6-MW-5[d]			6-FB-1		6-EB-1		6-TB-1		TB-1		
	Sample Collection Date		8/23/94*	05/16/02	8/23/94*	8/23/94*	8/23/94*	05/16/02	11/14/07	11/29/12	11/17/17	8/22/94*	05/16/02	8/22/94*	05/16/02	8/23/94*	05/16/02	11/14/07	11/29/12	11/17/17
Analyte	**HBN**	**PQL**																		
Field Parameters																				
pH (standard units)	--	--	5.4	6.2	6.8	6.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Conductivity (mS/cm)	--	--	NA	0.908	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Temperature (^{o}C)	--	--	NA	16.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
D.O. (mg/L)	--	--	NA	4.59	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Permit List 4 Volatiles (µg/L)																				
1,1-Dichloroethene	7	5	--	< 5	--	--	--	30	57	84	98.6	--	< 5	--	< 5	--	< 5	< 5	< 5	< 1
cis-1,2-Dichloroethene	--	5	NA	< 5	NA	NA	NA	83	95	96	66.1	NA	< 5	NA	< 5	NA	< 5	< 5	< 5	< 1
1,2-Dichloroethene (total)	100	5	--	NA	--	--	10	NA	NA	NA	NA	--	NA	--	NA	--	NA	NA	NA	NA
Trichloroethene	5	5	--	< 5	--	--	23	110	130	170	170	--	< 5	--	< 5	--	< 5	< 5	< 5	< 1
Benzene	5	5	--	< 5	--	--	2 J	< 5	< 5	< 5	< 1	--	< 5	--	< 5	--	< 5	< 5	< 5	< 1
Tetrachloroethene	5	5	--	< 5	--	--	--	6	17	45	75.2	--	< 5	--	< 5	--	< 5	< 5	< 5	< 1
Inorganic Parameters (µg/L)																				
Antimony	10	30	--	< 5	2.3	--	--	< 5	NA	NA	NA	--	< 5	--	< 5	--	< 5	NA	NA	NA
Chromium	100	10	2 J	< 3	7.9	3.8 B	--	< 3	NA	NA	NA	1	< 3	--	< 3	--	< 3	NA	NA	NA

Notes:
mg/L - milligrams per liter
µg/L - micrograms per liter
HBN - Health Based Number
PQL - Practical Quantitation Limit
* - Data presented in *RCRA Facility Investigation Report for RFI Unit 6,* dated 3 March 1995
< 5 or < 1- Analyte not detected, value indicates detection limit
-- - Not detected, detection limit not available
NA - Not analyzed
J - Analyte present, result may not be accurate or precise
B - Not detected substantially above the level reported in laboratory or field blanks
d - Sample is a duplicate of 6-MW-2